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VOL. IX DECEMBER, 1912 NO. 5

# BULLETIN OF BROWN UNIVERSITY

## THE CATALOGUE 1912-1913

PROVIDENCE
PUBLISHED BY THE UNIVERSITY
[APRIL, MAY, JUNE, OCTOBER, DECEMBER]

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Correspondence addressed simply to Brown University, Providence, Rhode Island, may be expected to reach the proper department, but in order to avoid delay correspondents are requested to note the following directions:

Communications relating to matters directly in the charge of the Corporation, and all correspondence bearing upon the general interests of the University, should be addressed to the President.

Requests for the Annual Catalogue and other publications, and inquiries relating to the admission of Undergraduate students should be addressed to the Registrar.

Inquiries concerning scholarships should be addressed to the Secretary of the Committee on Scholarships.

Inquiries concerning other matters pertaining to Undergraduate students should be addressed to the Dean of the University.

Inquiries in regard to the Graduate Department should be addressed to the Dean of the Graduate Department.

Inquiries concerning the Women's College should be addressed to the Dean of the Women's College, Pembroke Hall.

Inquiries or information concerning Alumni should be sent to the Keeper of Graduate Records, University Library.

http://www.archive.org/details/catalogue95brow0ft

# THE CATALOGUE
## OF
# BROWN UNIVERSITY

ONE HUNDRED AND FORTY-NINTH YEAR

1912-1913

PROVIDENCE, RHODE ISLAND
PUBLISHED BY THE UNIVERSITY
1912

D. B. UPDIKE, THE MERRYMOUNT PRESS, BOSTON

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# CALENDAR 1912–1913

*Vacations and holidays occurring within the academic year 1912–13 are indicated by dark type.*

## 1912

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## 1913

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1912

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|---|---|
| September 4. | *Wednesday.* Annual Meeting of the Corporation (first Wednesday in September). |
| September 18–23. | *Wednesday, Thursday, Friday, Saturday, and Monday.* Examinations for admission to the Freshman class and to advanced standing. |
| September 23, 24. | *Monday and Tuesday.* Registration of new students and enrolment of students previously in residence. |
| September 25. | *Wednesday.* Academic Year begins (fourth Wednesday in September). Registration of Graduate students. |
| October 5. | *Saturday.* Examination in Greek for the President's Premiums, 5 Maxcy Hall, 2.30 p.m. |
| October 9. | *Wednesday.* Examination in Latin for the President's Premiums, 1 Sayles Hall, 2.30 p.m. |
| October 12. | *Saturday.* Examination in Mathematics for the Hartshorn Premiums, 27 Wilson Hall, 2 p.m. |
| October 16. | *Wednesday.* Examination in French for the Hicks Premiums, 1 Sayles Hall, 2.30 p.m. |
| October 19. | *Saturday.* Examination in German for the Hicks Premiums, 5 Sayles Hall, 2.30 p.m. |
| November 28. | *Thursday.* Thanksgiving Day. No University exercises. |
| December 4. | *Wednesday.* Preliminary discussion for the Class of 1880 Prizes. |
| December 6. | *Friday.* Last day for receiving essays submitted in competition for the Class of 1880 Prizes. |
| December 11. | *Wednesday.* Public discussion for the Class of 1880 Prizes. |
| Dec. 23, 1912, *to* Jan. 2, 1913. | *Monday to Thursday.* Christmas Recess. |

1913

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|---|---|
| February 1. | *Saturday.* Last day for applications of competitors for the Carpenter Prizes in Elocution. |
| Jan. 27 *to* Feb. 6. | *Monday to Thursday.* Semester examinations. |
| February 7–11. | *Friday to Tuesday.* Mid-year Recess. |
| February 10, 11. | *Monday and Tuesday.* Enrolment of Undergraduate students. |
| February 12. | *Wednesday.* Second Semester begins. Enrolment of Graduate students. |
| February 22. | *Saturday.* Washington's Birthday. No University exercises. |
| March 26. | *Wednesday.* Last day for receiving essays submitted in competition for the Gaston Prize Medal. |
| April 1. | *Tuesday.* Last day for receiving applications for examination for the degree of Doctor of Philosophy, or of Master of Arts *in absentia.* |
| April 3–9. | *Thursday to Wednesday.* Spring Recess. |
| April 15. | *Tuesday.* Last day for receiving applications for the Grand Army of the Republic Fellowship. |
| April 29. | *Tuesday.* Carpenter Prize Speaking Competition. |
| April 30. | *Wednesday.* Last day for receiving theses of candidates for the degree of Doctor of Philosophy. |
| May 3. | *Saturday.* Last day for receiving essays submitted in competition for the Bishop McVickar prizes. |
| May 6. | *Tuesday.* Gaston Prize Medal Competition. |
| May 13. | *Tuesday.* Hicks Prize Debate. |
| May 30. | *Friday.* Memorial Day. No University exercises. |
| May 31. | *Saturday.* Last day for examinations for advanced degrees. |
| June 3–13. | *Tuesday to Friday.* Semester examinations. |
| June 15. | *Sunday.* Baccalaureate Sermon, First Baptist Meeting House, 4.30 p.m. |

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|---|---|
| JUNE 16. | *Monday.* Class Day. |
| JUNE 17. | *Tuesday.* Annual Meeting of the Phi Beta Kappa Society, Administration Building, 9.30 a.m.<br>Ivy Day, Pembroke Hall.<br>Annual Meeting of the Associated Alumni, Manning Hall, 2.30 p.m. |
| JUNE 18. | *Wednesday.* ONE HUNDRED AND FORTY-FIFTH ANNUAL COMMENCEMENT (third Wednesday in June), First Baptist Meeting House, 10 a.m. |
| JUNE 19. | *Thursday.* Meeting of the Corporation. |
| JUNE 19 *to* SEPT. 23. | SUMMER VACATION. |
| SEPTEMBER 3. | *Wednesday.* Annual Meeting of the Corporation (first Wednesday in September). |
| SEPTEMBER 17–22. | *Wednesday, Thursday, Friday, Saturday, and Monday.* Examinations for admission to the Freshman class and to advanced standing. |
| SEPTEMBER 22, 23. | *Monday and Tuesday.* Registration of new students and enrolment of students previously in residence. |
| SEPTEMBER 24. | *Wednesday.* ACADEMIC YEAR BEGINS (fourth Wednesday in September). |

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Rev. THOMAS DAVIS ANDERSON, D.D., Secretary
CORNELIUS SOWLE SWEETLAND, A.M., Treasurer

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ON THE CARPENTER PRIZE FUND

Messrs. Lapham and Duane.

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ON PUBLICATIONS

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The President, Mrs. John Nicholas Brown, Messrs. Goddard, Edwards, and Kellen.

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AUDITORS

Messrs. Sharpe and Green.

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CARL BARUS, PH.D., LL.D., DEAN OF THE GRADUATE DEPARTMENT
LIDA SHAW KING, A.M., LITT.D., DEAN OF THE WOMEN'S COLLEGE
FREDERICK TAFT GUILD, A.M., REGISTRAR, AND SECRETARY OF THE FACULTY

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*Assistant Professor of Physics*

†On leave of absence during the academic year 1912–13.

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*Professor of Mechanical Engineering*

GEORGE WYLLYS BENEDICT, PH.D. — 16 John Street
*Associate Professor of English*

THOMAS CROSBY, A.M. — 49 George Street
*Associate Professor of English and Public Speaking*

HENRY BARRETT HUNTINGTON, A.B. — 23 John Street
*Associate Professor of English*

GEORGE PARKER WINSHIP, A.M. — 31 Benevolent Street
*Librarian of the John Carter Brown Library*

LIDA SHAW KING, A.M., LITT.D. — 8 Cushing Street
*Dean of the Women's College; Professor of Classical Literature and Archaeology*

FREDERICK WILLIAM MARVEL, PH.B. — 281 Olney Street
*Professor of Physical Training*

ANSEL BROOKS, PH.B., M.E. — 25 Everett Avenue
*Associate Professor of Mechanics and Mechanical Drawing*

†CAMILLO VON KLENZE, PH.D. — 125 Lloyd Avenue
*Professor of the Germanic Languages and Literatures*

LESTER FRANK WARD, LL.D. — 1 University Hall
*Professor of Sociology*

CHARLES WILSON BROWN, A.M. — 19 Diman Place
*Assistant Professor of Geology*

THURSTON MASON PHETTEPLACE, M.E., A.M. — 1596 Broad Street
*Assistant Professor of Mechanical Engineering*

HERBERT EUGENE WALTER, PH.D. — 53 Arlington Avenue
*Assistant Professor of Biology*

† On leave of absence during the academic year 1912–13.

ROLAND GEORGE DWIGHT RICHARDSON, PH.D.
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JAMES MARVIN MOTLEY, PH.D. 125 Butler Avenue
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RAYMOND CLARE ARCHIBALD, PH.D. 9 Charles Field Street
*Assistant Professor of Pure Mathematics*

THEODORE FRELINGHUYSEN COLLIER, PH.D. 116 Governor Street
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HARDY CROSS, A.B., M.C.E. 388 Benefit Street
*Assistant Professor of Civil Engineering*

HARLAN HARVEY YORK, PH.D. 51 Arlington Avenue
*Assistant Professor of Botany*

WILLIAM THOMSON HASTINGS, A.M. 13 John Street
*Assistant Professor of English*

JOHN CORLISS DUNNING, PH.D. 45 Waterman Street
*Assistant Professor of Political Science*

STEPHEN SHELDON COLVIN, PH.D. 335 Lloyd Avenue
*Professor of Educational Psychology*

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GLANVILLE TERRELL, PH.D. 59 Charles Field Street
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*Instructor in German*

STANLEY BATES HARKNESS, A.B. 92 Williams Street
*Instructor in English*

JOHN HERBERT BACHMANN, A.M. — 167 Power Street
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*Assistant in English*

JOHN TRACY WINTERICH, A.B. — 27 University Hall
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*Demonstrator in Anatomy*

THERON CLARK, A.B. — 152 Congdon Street
*Assistant Registrar*

EMMA BRADFORD STANTON, A.M. — Bristol
*Registrar of the Women's College*

| | |
|---|---|
| HENRY DEWEES CADY<br>*Instructor in Shop Practice* | 2 University Hall |
| EDWIN AYLSWORTH BURLINGAME<br>*Superintendent of Grounds and Buildings* | 359 Brook Street |
| PETER PINEO CHASE, M.D.<br>*Physician to the University* | 62 College Street |
| HARRY EDWARD ROELKE, PH.B.<br>*Reference Librarian* | 11 Brunonia Hall |
| LAURA RUSSELL GIBBS, L.S.B.<br>*Cataloguer* | 96 South Angell Street |
| RUTH CONSTANCE BURROUGHS, PH.B.<br>*Assistant Reference Librarian* | 58 Sayles Ave., Pawtucket |
| GERTRUDE MARY ALLEN, PH.B.<br>*Clerk in the Library* | Riverside |
| MARY WIDMAN BRONSON, PH.B.<br>*Assistant Cataloguer* | 11 Benefit Street |
| EDITH MARIE LINNEA CARLBORG, A.B.<br>*Assistant Cataloguer* | 124 Atlantic Avenue |
| REBECCA PHILLIPS STEERE<br>*Cataloguer in the John Carter Brown Library* | 84 Waterman Street |
| MARGARET BINGHAM STILLWELL, A.B.<br>*Assistant in the John Carter Brown Library* | 53 Elton Street |
| JOHN EDWARDS<br>*Assistant in the Ladd Observatory* | Ladd Observatory |
| LUCIUS JOSEPH GAY<br>*Assistant in the Gymnasium* | 46 Daboll Street |
| LOUISE PROSSER BATES, A.M.<br>*Keeper of Graduate Records* | Oak Lawn |
| GENE WILDER WARE, A.B.<br>*Organist and Director of Chapel Music* | 136 Adelaide Avenue |

## STANDING COMMITTEES OF THE FACULTY

ON REGISTRATION AND ATTENDANCE

Dean RANDALL, Professors UPTON, DELABARRE, HILL, and HUNTINGTON, Dean KING, Mr. GUILD.

ON THE CURRICULUM

Professors POLAND, DAVIS, HARKNESS, GARDNER, RANDALL, BRONSON, EVERETT, ALLINSON, HILL, MEAD, and MACDONALD, Mr. GUILD.

ON STUDENT ORGANIZATIONS

Professors Delabarre, Langdon, Hill, Potter, Marvel, and Benedict.

ON STUDENT ADVISERS

Professors Greene, Crosby, Richardson, and Brown.

ON EXAMINATIONS

Professors Hill and Richardson, Mr. Guild.

## OFFICE HOURS

THE PRESIDENT. 7 Administration Building: *11.30 a.m. to 12.30 p.m., except Mondays and Saturdays.*

THE DEAN OF THE UNIVERSITY. 5 Administration Building: *1.30 to 2.30 p.m., except Saturdays.*

THE REGISTRAR, AND SECRETARY OF THE FACULTY. 4 Administration Building: *8.30 a.m. to 4 p.m.; Saturdays to 1 p.m. Consultation Hours, 12 m. to 1 p.m., 3 to 4 p.m.*

THE ASSISTANT REGISTRAR. 4 Administration Building: *8.30 a.m. to 12 m., 1.30 to 4 p.m.; Saturdays to 1 p.m.*

THE DEAN OF THE GRADUATE DEPARTMENT. 5 or 6 Wilson Hall: *12.20 to 1.20, and 3.20 to 4.20 p.m.*

THE LIBRARIAN OF THE UNIVERSITY. The University Library: *9 to 10 a.m., 3 to 4 p.m.; Saturdays 9 to 10 a.m.*

THE LIBRARIAN OF THE JOHN CARTER BROWN LIBRARY. The Library: *9 a.m. to 5 p.m.*

THE SECRETARY OF THE TEACHERS' BUREAU. 10 Administration Building: *4.20 p.m. Mondays and Fridays; 5.20 p.m. Wednesdays; 12.20 p.m. Saturdays.*

THE SUPERINTENDENT OF GROUNDS AND BUILDINGS. 1 University Hall: *8.30 to 9.30 a.m., except Mondays; 2 to 2.30 p.m., except Saturdays.*

THE DEAN OF THE WOMEN'S COLLEGE. Pembroke Hall, Meeting Street: *10.15 to 11.25 a.m., except Saturdays.*

THE REGISTRAR OF THE WOMEN'S COLLEGE. Pembroke Hall, Meeting Street: *9 a.m. to 1 p.m., 2 to 4 p.m.; Saturdays to 1 p.m.*

THE PHYSICIAN TO THE UNIVERSITY. 62 College Street: *2 to 4 p.m., 7 to 8 p.m. Telephone, Angell 1012–W.*

# HISTORY OF BROWN UNIVERSITY

A GENERATION before the establishment of any institution of higher education in Rhode Island, Dean (afterwards Bishop) Berkeley, in pursuance of his cherished design of planting a Christian college in America, chose this colony as his place of residence. Here, at Newport or in its vicinity, he lived for nearly three years, from 1729 to 1731. At the close of this period it became evident that the money which had been voted for the project by the House of Commons would not be paid, and Berkeley reluctantly abandoned his project and returned to England. Though he had no direct relation to the college afterwards established, yet he inspired an interest in higher education among the colonists and thus made easier the success of the later undertaking.

In 1762 the Philadelphia Baptist Association, in view of the disabilities attaching to Baptist students in most of the existing American colleges, welcomed a proposal offered by the Reverend Morgan Edwards, a clergyman of Welsh birth, at that time pastor of the First Baptist Church in Philadelphia, to found in Rhode Island a college that should be under the control of their own denomination. James Manning, who had just been graduated from Princeton, was appointed by the Association as its agent to establish "a seminary of polite literature subject to the government of the Baptists."

In deciding upon the location of the new college, a canvass of the colonies had shown the advantages to be clearly on the side of Rhode Island, which recognized absolute religious liberty, and was, moreover, a Baptist colony in origin and popular attachment. There was no rival institution in the field; and the important cities of Newport and Providence, the former being the second city in New England, furnished an encouraging prospect of future support. Accordingly, in 1764, the friends of the movement obtained from the General Assembly the charter which still remains in force. Although, under the rules of the charter, the President and a majority of both the Fellows and the Trustees must be Baptists, the three important positions of Chancellor, Secretary, and Treasurer are without denominational restriction, and all religious tests and sectarian instruction are strictly prohibited. The institution was known during the first forty years of its existence as Rhode Island College.

As the College was at the beginning without funds, and only a scanty return could be expected from students' fees, it was necessary that the president should support himself and his family by some other means. The founding of a Baptist church in Warren and the call of Mr. Manning to its pastorate offered a solution of the difficulty; and hither Mr. Manning brought his family in the spring of 1764. His first act towards the establishment of a college was the opening of a Latin school. This preparatory school was later removed with the College to Providence, where it flourished for a hundred and forty years under the name of the University Grammar School. At the second meeting of the Corporation, September 4, 1765, Mr. Manning was formally appointed "president of the College, professor of languages and other branches of learning;" the first student had been matriculated the day before. In the following year David Howell was appointed tutor, but no other addition was made to the Faculty until 1774. In 1769 the first class (of seven members) was graduated at Warren. This town had not generally been regarded as the permanent seat of the College, and the necessity which now arose of erecting a college building compelled a final choice of location. After a spirited contest for the honor among the leading towns of the colony, the choice fell upon Providence. Here in 1770 the first college building, the present University Hall, modeled after Nassau Hall at Princeton, and a house for the president were both built on the college grounds, the cost being covered by subscriptions, chiefly from residents of Providence.

In 1771 President Manning was called to the pastorate of the First Baptist Church in Providence; he served the church in this capacity, in addition to his college duties, from that date until the close of his life. In December, 1776, the work of the College was interrupted by the Revolutionary War, and it was not resumed until the fall of 1782, University Hall being used meanwhile as a barrack and hospital for the combined American and French troops. Upon the reorganization of the College important additions were made to the library and the philosophical apparatus. The first college funds, amounting to $4500, were collected in England and Ireland by the Reverend Morgan Edwards in 1767–8. In the next two years the Reverend Hezekiah Smith obtained subscriptions amounting to $2500 in South Carolina and Georgia. The former contribution was made a permanent fund; the latter was expended in the construc-

tion of the college buildings. Further gifts were received for a time from the Philadelphia, Charleston, and Warren Baptist Associations, but they appear to have ceased with the outbreak of the Revolutionary War. In 1791, after twenty-nine years of service as founder and director of Rhode Island College, President Manning died. The College had become firmly established, with a graduate roll of one hundred and forty-nine; the last graduating class, that of 1790, had numbered twenty-two. At the time of his death the Faculty consisted of the president, four professors, and two tutors. The discipline during this period had been strict and paternal, the officers of instruction living under the same roof with the students and making frequent visits of inspection to their rooms. President Manning at first taught all the branches studied, but was designated professor of languages, afterwards of moral philosophy. David Howell, his assistant, taught mathematics and natural philosophy, and is said to have taught also French, German, and Hebrew. He was appointed professor of natural philosophy in 1769, and of law in 1790, but never taught the latter subject. Benjamin Waterhouse was appointed professor of natural history in 1784; and Benjamin West, professor of mathematics and astronomy in 1786.

The successor of President Manning was the Reverend Jonathan Maxcy, a graduate in the class of 1787, who had been professor of divinity 1791–2. He served from 1792 until 1802, when he resigned his office to accept the presidency of Union College. During the last year of his administration at Rhode Island College a class numbering twenty-eight was graduated.

The third president of the College, the Reverend Asa Messer, a graduate in the class of 1790, who had served as professor of learned languages 1796–9, and of mathematics and natural philosophy 1799–1802, directed the affairs of the institution from 1802 until his resignation in 1826. During his presidency of twenty-four years the College was greatly expanded. A class numbering forty-eight was graduated in 1825, the Faculty in that year consisting of the president, nine professors, and two tutors. A medical school was established, which existed from 1811 until 1828 and sent out eighty-seven graduates. The special professorships created for the medical school were: materia medica and botany, 1811; anatomy and surgery, 1811; chemistry, 1811; theory and practice of medicine, 1815. A professor of moral philosophy and metaphysics was appointed in 1811; one of oratory and belles-lettres in 1815; and one of the Latin and

Greek languages and literature in 1825. In 1826 the permanent funds of the University amounted to $31,300.

In 1792 Nicholas Brown, a graduate in the class of 1786, gave $500 with which to purchase law books for the Library. In 1804 he endowed a professorship of oratory and belles-lettres. In the same year the name of the institution was changed in his honor to Brown University. In 1822 he built Hope College at his own expense, in 1834 Manning Hall, and in 1840 the second president's house. The last-named building has been used since 1899 as a refectory. The total value of Mr. Brown's various gifts to the University was not less than $160,000. Mr. Brown also served the University in a most efficient way as treasurer 1796–1825. He was trustee 1791–1825, and fellow from 1825 until his death in 1841.

The fourth president, the Reverend Francis Wayland, entered upon his official duties in 1827. He at once raised the standard of scholarship and gradually increased the scope of the instruction. He finally accomplished an entire reorganization of the University on the basis of the elective principle. In accordance with this "New System," the bachelor's degree was given for a three years' course and the master's degree for a four years' course. Graduate study and special study were both encouraged; and the sciences, in accordance with the spirit of the charter, were made prominent in the curriculum. This system was not put into operation until 1850, and was fully in force only until his retirement five years later. The increase in the scope of the curriculum during President Wayland's administration is clearly shown in the following list of subjects to which professors or instructors were assigned at the dates annexed: chemistry, physiology, and geology, 1834; moral and intellectual philosophy, 1834; belles-lettres, 1835; rhetoric, 1837; Hebrew literature, 1838; modern languages and literature, 1843; Greek, 1843; Latin, 1844; French, 1844; history and political economy, 1850; natural philosophy and civil engineering, 1850; chemistry applied to the arts, 1850; rhetoric and English literature, 1851; didactics (*i. e.*, pedagogy), 1851; analytical chemistry, 1854. The influence of President Wayland was felt, not in an increase of the number of students, but in an elevation of the intellectual and moral tone of the institution. Discipline, which had grown lax, was strictly enforced. During his administration the college grounds were laid out, and the Library was placed on a sound financial basis. Rhode Island Hall was erected in 1840 from sub-

scriptions by Rhode Island men and women. The permanent funds were increased to $200,000. Dr. Wayland resigned the presidency in 1855, having won for the University, by his fame as a writer, thinker, and educational reformer, an enviable distinction both at home and abroad.

The fifth president of the University, the Reverend Barnas Sears, a graduate in the class of 1825, held office from 1855 until 1867, when he resigned the presidency to become general agent of the Peabody Education Fund. During his incumbency the only new subject added to the curriculum was physical geography, in 1864. Although the term of President Sears covered the financial crisis of 1857 and the Civil War, a notable increase was made both in the funds and in the number of students. A system of scholarships was established, and over $220,000 was collected in subscriptions. The Chemical Laboratory was built in 1862. In the last class that entered under President Sears seventy-three students were enrolled. Three hundred graduates and students of Brown entered the Union service, 1861–5. Of these twenty-one laid down their lives.

The Reverend Alexis Caswell, a graduate in the class of 1822, was the sixth president of the University, his term covering the years 1868–72. Under his administration the department of physics was organized, and the endowment was increased from $365,000 to a sum exceeding $550,000.

Upon the resignation of Dr. Caswell, the Reverend Ezekiel Gilman Robinson, a graduate in the class of 1838, became president. Dr. Robinson's presidency extended over the seventeen years 1872–1889. This period was marked by a further increase in the attendance, the class of 1889 being graduated with a membership of fifty-six. The following subjects were added to the curriculum, or were emphasized by the appointment of separate instructors: special branches of agriculture, 1872; zoölogy and agriculture, 1874; physiology, 1874; botany, 1877; zoölogy and geology, 1878; elocution, 1880; astronomy, 1884; logic, 1886; history, 1888; political economy, 1888. The funds were increased to $980,000, and important additions were made to the buildings. Rhode Island Hall was enlarged in 1875. The Library, the gift of John Carter Brown, of the class of 1816, was built in 1878, and Slater Hall, the gift of Horatio Nelson Slater, in 1879. Sayles Hall, the gift of William Francis Sayles, a memorial to his son, William Clark Sayles, a member of the class of 1878, was built in 1881. University Hall, which had been renovated

in 1850, was again renovated in 1883. Dr. Robinson recognized the fact that a great opportunity for a university existed at Brown, and, though he was not able fully to realize his purposes, he prepared the way for the great enlargement of the institution under his successor. Besides the addition of various courses, a beginning was made in systematic graduate instruction. Dr. Robinson resigned the presidency in 1889.

The eighth president of the University was the Reverend Elisha Benjamin Andrews, a graduate in the class of 1870. With his accession in 1889 the modern life of the University properly begins. In the year preceding his presidency three graduate students were enrolled; in the last year of his term of service the graduate students numbered 101, the total number of students for the same years being, respectively, 268 and 860. The officers of instruction for the corresponding years increased in number from twenty-two to seventy-three. All the old departments were expanded, and the number of departments was increased from sixteen in 1889–90 to twenty-five in 1897–8. The department of philosophy was enlarged by the addition of psychology and pedagogy. American and European history were assigned to separate professors, and political economy was made a department. The departments of Greek literature and history, Roman literature and history, English literature and language, Germanic languages and literatures, and Romance languages and literatures were reorganized and extended. Rhetoric and oratory were made an independent department. The departments of mathematics, mechanical engineering, astronomy, physics (including electrical engineering), chemistry, zoölogy, geology, and anthropology, and botany were extended in scope and thoroughness. New departments were formed for the subjects of social and political science including law, fine arts including the history of art and music, Indo-European philology, Biblical literature and history including the Semitic languages and New Testament Greek, mechanical drawing, civil engineering, comparative anatomy, military science and tactics, and bibliography.

The museum of fine arts was founded in 1889, and that of anthropology in 1891. The funds were increased to $1,125,685, and important additions were made to the buildings and grounds. In 1891 Hope College was renovated; Wilson Hall, the bequest of George Francis Wilson, was built; the Ladd Observatory was presented to the University by the Honorable Herbert W. Ladd; and the Lyman

Gymnasium, named in honor of its principal donor, was erected. Maxcy Hall was built in 1895. Three buildings, known as the Howell, Messer, and Brown Street houses were also secured for dormitory purposes. The old playground of the University, now known as Lincoln Field, was graded and fitted up for ball-games and other athletic purposes in 1889. In 1898 a new athletic field was laid out on Camp Street, a mile and a half from the University. In 1891 the Grand Army of the Republic Fellowship Fund of $10,000 was given to the University by the Rhode Island Department of that organization.

The Women's College was founded in October, 1891. At first only the privileges of University examinations and certificates of proficiency were granted. In June, 1892, all the College and University degrees and the graduate courses were opened to women. In November, 1897, the institution was accepted by the Corporation and officially designated the Women's College in Brown University. The immediate charge of this department, as of all others in the University, is in the hands of the Corporation. All instruction is given by members of the University Faculty. Pembroke Hall, which was built by the Rhode Island Society for the Collegiate Education of Women, was formally transferred to the University in October, 1897, and was accepted as the recitation hall of the Women's College.

In 1898 Dr. Andrews resigned the presidency to become Superintendent of Schools in Chicago. Dr. Benjamin Franklin Clarke, the senior member of the Faculty, who had served as president *pro tempore* during the absence of Dr. Andrews in Europe in 1896–7, was appointed president *ad interim*, and served during the academic year 1898–9.

The ninth president of the University is the Reverend William Herbert Perry Faunce, a graduate in the class of 1880, who entered upon his official duties on Commencement Day, 1899. At Commencement, 1900, announcement was made of an addition of over a million dollars to the endowment of the University. To this was added a year later a second million, including the endowment of the John Carter Brown Library. In 1900 the Slater Memorial Homestead was presented by Mrs. Horatio N. Slater, as a home for the students of the Women's College. In 1901 the president's house was erected at the corner of Hope and Manning streets. In 1902 the Van Wickle Administration Building was completed, this structure as well as the gates opposite being the bequest of Augustus Stout Van Wickle, of

the class of 1876. In 1904 Rockefeller Hall, the gift of John D. Rockefeller, was opened for the use of the Brown Union, a social organization of students and alumni which was formed in that year. In the same year the Engineering Building, on Lincoln Field, Caswell Hall, a dormitory fronting on Thayer Street, and the Colgate Hoyt swimming-pool, the gift of Colgate Hoyt, were erected, and a great organ, the gift of Lucian Sharpe, of the class of 1893, was placed in Sayles Hall. In 1904 the John Nicholas Brown Gate was built as a memorial to the late John Nicholas Brown by his widow. In the same year the Carrie Tower, a clock tower, erected by Paul Bajnotti, of Turin, to the memory of his wife, Carrie Mathilde Brown, was presented to the University. Since 1901 an iron fence with brick and stone posts has been built around the front and the middle campus, each section having been contributed by or in memory of some class. The classes of 1872, 1884, and 1887 have contributed gates. In the summer of 1905 the exterior of University Hall was restored to its original appearance at the expense of Marsden J. Perry. In 1906 the Gymnasium of the Women's College was erected by Frank A. Sayles as a memorial to his sister, Martha Fessenden Sayles. In 1907 the Marston Field House, the gift of Edgar L. Marston, of New York, was erected on Andrews Field. In the same year Stephen O. Metcalf gave a lot of land adjoining the Women's College and had the grounds laid out at his expense. In 1910 Miller Hall, the residence hall of the Women's College, was erected through the generosity of a group of friends. It was named in memory of Mrs. Horace G. Miller, a benefactor of the College. In April, 1912, the funds of the University, exclusive of those pertaining to the John Carter Brown Library, amounted to $3,896,766.82. At Commencement, 1912, announcement was made of the addition of a million dollars to the funds of the University.

The Library of the University dates from 1767, when the Reverend Morgan Edwards collected books for it in England. The collection was at first kept in University Hall. It was removed to Manning Hall upon the completion of that building in 1835, and in 1878 was transferred to the building on Waterman Street given by John Carter Brown, now used for the accommodation of department libraries. In April, 1909, the corner-stone of the John Hay Library was laid; the building was occupied at the opening of the academic year 1910–11. In 1842 the Library contained ten thousand volumes; in 1878, forty-eight thousand. The present number, including the books

in the twenty department libraries, but not including the John Carter Brown Library, is one hundred and ninety-five thousand.

The Library Fund, established under President Wayland, has been supplemented by fourteen special funds, devoted to the departments of European history, United States history, medieval and church history, botany, the arts of design, biology, the classical languages and literatures, English literature, American poetry, political science, engineering, and general reference. Gifts of one thousand dollars each have been made to the Library by the classes of 1872, 1884, 1885, 1886, 1887, 1888, and 1892. In 1884, by the will of the Honorable Henry B. Anthony, the Library came into possession of the Harris Collection of American Poetry, numbering five thousand volumes, since increased to thirteen thousand, and provided with an endowment of $5,000, the gift of Samuel C. Eastman, Esq. In 1901 there was presented to the University the John Carter Brown Library, the most complete collection in the world on the history of the two Americas down to the end of the eighteenth century; the sum of $500,000 was also given as an endowment and the sum of $150,000 for the erection of a building. The building was dedicated in May, 1904. In October, 1903, the University received by the gift of Marsden J. Perry the Sidney S. Rider Collection of manuscripts, books, and other material, forming a library of the first importance to students of the history of Rhode Island. In June, 1910, the Library received as a gift from the classes of 1899 and 1900 the Hammond Lamont Library of twenty-seven hundred volumes, chiefly in the field of eighteenth century English literature. In November, 1911, the University received by bequest the George Earl Church Collection of South Americana, numbering three thousand five hundred volumes. In May, 1912, the University received by the gift of the founder the Corthell Library of Engineering, numbering seven thousand volumes and pamphlets, accompanied with $5,000 for its endowment. In October, 1912, the University received by the gift of Henry D. Sharpe, the Chambers Dante Collection of eleven hundred volumes.

At the close of the one hundred and forty-fourth Commencement of the University, in 1912, there were enrolled the names of 7,405 graduates,—6,782 men and 623 women. Of this number, 6,542 had received the College or University first degree; 148, exclusive of the foregoing, had received advanced degrees; 69, not previously reckoned, had received the degree of Doctor of Medicine; 637 others had received honorary degrees. Of the entire number, 4,274, or 57.7 per cent, were living.

# THE
# CHARTER OF BROWN UNIVERSITY‡

*Date of the Charter*

BY the Honorable the Governor and Company of the English Colony of Rhode Island and Providence Plantations in New England in America in General Assembly convened at East Greenwich within and for the Colony aforesaid on the last Monday in February One Thousand Seven Hundred and Sixty-four.

*Preamble*

*Whereas* Institutions for liberal Education are highly beneficial to Society by forming the rising Generation to Virtue, Knowledge, and useful Literature; and thus preserving in the Community a Succession of Men duly qualified for discharging the Offices of Life with Usefulness and Reputation; they have therefore justly merited and received the the Attention and Encouragement of every wise and well regulated State: And whereas a Public School or Seminary, erected for that Purpose within this Colony to which the Youth may freely resort for Education in the vernacular and learned Languages, and in the liberal Arts and Sciences would be for the general Advantage and Honor of the Government: And whereas Daniel Jenckes Esq; Nicholas Tillinghast Esq; Nicholas Gardiner Esq; Col. Josias Lyndon, Col. Elisha Reynolds, Peleg Thurston Esq; Simon Pease Esq; John Tillinghast Esq; George Hazard Esq; Col. Job Bennet, Nicholas Easton Esq; Arthur Fenner Esq; Mr. Ezekiel Gardiner, Mr. John Waterman, Mr. James Barker Junr, Mr. John Holmes, Solomon Drown Esq; Mr. Samuel Winsor, Mr. Joseph Sheldon, Charles Rhodes Esq; Mr. Nicholas Brown, Col, Barzillai Richmond, Mr. John Brown, Mr. Gideon Hoxsey, Mr. Thomas Eyres, Mr. Thomas Potter, Jun. Mr. Peleg Barker, Mr. Edward Thurston, Mr. William Redwood, Joseph Clarke Esq; Mr. John G Wanton, and Mr. Thomas Robinson with many other Persons, appear as Undertakers in the valuable Design: And thereupon a Petition hath been preferred to this Assembly, praying that full Liberty and Power may be granted unto such of them, with others, as are hereafter

*Petition of the Undertakers*

‡ *With the exception of the marginal analysis and the notes, this reprint is an exact copy of the original charter engrossed on parchment, preserved in the archives of the University.*

mentioned, to found, endow, order, and govern a College or University, within this Colony; and that, for the more effectual Execution of this Design, they may be incorporated into one Body Politic, to be known in the Law, with the Powers, Privileges, and Franchises, necessary for the Purpose aforesaid.

*Now therefore know ye,* That being willing to encourage and patronize such an honorable and useful Institution, we the said Governor and Company, in General Assembly convened, Do, for ourselves and our Successors, in and by Virtue of the Power and Authority, within the Jurisdiction of this Colony, to us by the Royal Charter granted, and committed, Enact, Grant, Constitute, Ordain, and Declare, And it is hereby Enacted, Granted, Constituted, Ordained and Declared, That the Hon. Stephen Hopkins Esq; the Hon. Joseph Wanton Jun. Esq; the Hon. Samuel Ward Esq; the Hon. William Ellery Esq; John Tillinghast Esq; Simon Pease Esq; James Honyman Esq; Nicholas Easton Esq; Nicholas Tillinghast Esq; Darius Sessions Esq; Joseph Harris Esq; Francis Willet Esq; William Logan Esq; Daniel Jenckes Esq; George Hazard Esq; Nicholas Brown Esq; Jeremiah Niles Esq; Joshua Babcock Esq; Mr. John G Wanton, the Rev. Edward Upham, the Rev. Jeremiah Condy, the Rev. Marmaduke Brown, the Rev. Gardner Thurston, the Rev. Ezra Stiles, the Rev. John Greaves, the Rev. John Maxson, the Rev. Samuel Winsor, the Rev. John Gano, the Rev. Morgan Edwards, the Rev. Isaac Eaton, the Rev. Samuel Stillman, the Rev. Samuel Jones, the Rev. James Manning, the Rev. Russel Mason, Col. Elisha Reynolds, Col. Josias Lyndon, Col. Job Bennet, Mr. Ephraim Bowen, Joshua Clarke Esq; Capt. Jonathan Slade, John Taylor Esq; Mr. Robert Shettell Jones, Azariah Dunham Esq; Mr. Edward Thurston Junr. Mr. Thomas Eyres, Mr. Thomas Haszard, and Mr. Peleg Barker, or such, or so many of them as shall, within Twelve Months from the Date hereof, accept of this Trust, and qualify themselves as herein after directed, and their Successors, shall be forever hereafter One Body Corporate and Politic, in Fact and Name, to be known in Law by the Name of Trustees and Fellows of the College or University, in the English Colony of Rhode Island, and Providence Plantations in New England, in America; the Trustees and Fellows at any Time hereafter, giving such more particular Name to the Col-

*Original Corporators*

*Name*

lege, in Honor of the greatest and most distinguished Benefactor, ‡ or otherwise, as they shall think proper: Which Name, so given, shall, in all Acts, Instruments and Doings of said Body Politic, be superadded to their Corporate Name aforesaid, and become a Part of their legal Appellation by which it shall be forever known and distinguished: And that, by the same Name, they and their Successors, chosen by themselves as hereafter prescribed, shall, and may, have perpetual Succession; and shall, and may be Persons able and capable, in the Law, to sue and be sued, to plead and to be impleaded, to answer and to be answered unto, to defend and to be defended against, in all and singular Suits, Causes, Matters, Actions and Doings, of what Kind soever: And also to have, take, possess, purchase, acquire, or otherwise receive and hold Lands, Tenements, Hereditaments, Goods, Chattles, or other Estates; of all which they may, and shall stand and be seized, notwithstanding any Misnomer of the College, or the Corporation thereof; and by whatever Name, or however imperfectly the same shall be described in Gift, Bequests, and Assignments, provided the true Intent of the Assignor or Benefactor be evident:

*Powers of Corporation*

‡ *The following is an extract from the records of a meeting of the Corporation held September 6, 1804:*

A LETTER from Mr. Nicholas Brown, dated on this present day, having been read in the following words, to—wit:

*Gentlemen:* PROVIDENCE, *September 6, 1804.*

IT is known to you that I have long had an attachment to this institution as the place where my deceased brother Moses and myself received our education. This attachment derives additional strength from the recollection that my late honored Father was among the earliest, and most zealous patrons of the College; and is confirmed by my regard to the cause of Literature in general. Under these impressions I hereby make a donation of Five Thousand Dollars to Rhode Island College, to remain in perpetuity as a fund for the establishment of a Professorship of Oratory and Belles Lettres. The money will be paid next Commencement and is to be vested in such funds as the Corporation shall direct for its augumentation to a sufficiency in your judgment to produce a competent annual Salary for the within mentioned Professorship.

I am very respectfully, Gentlemen, with my best wishes for the prosperity of the College, your obedient friend,

NICHOLAS BROWN.

*Honored Corporation of Rhode Island College.*

IT is therefore voted: That the thanks of this Corporation be presented to Mr. Nicholas Brown for the aforesaid Donation, and it is further Voted, That this College be called and known in all future time by the Name of Brown University in Providence in the State of Rhode Island and Providence Plantations.

Also the same to grant, demise, aliene, lease, use, manage and improve according to the Tenor of the Donations, and to the Purposes, Trusts, and Uses to which they shall be seized thereof.

*To found,*

And full Liberty, Power, and Authority is hereby granted unto the said Trustees and Fellows, and their Successors, to found a College, or University, within this Colony, for promoting the liberal Arts, and universal Literature: And with the Monies, Estates, and Revenues, of which they shall from Time to Time become legally seized as aforesaid, to endow the same: And erect the necessary Buildings and Edifices thereof on such Place within this Colony as they shall think convenient: And generally to regulate, order, and govern the same, appoint officers, and make Laws, as herein after prescribed; and hold, use, and enjoy all the Liberties, Privileges, Exemptions, Dignities and Immunities, enjoyed by any College, or University, whatever.

*endow*

*and govern the College*

*And furthermore,* That the said Trustees and Fellows, and their Successors, shall, and may, forever hereafter have a Publick Seal to use for all Causes, Matters, and Affairs, whatever, of them and their Successors, and the same Seal to alter, break, and make anew, from Time to Time, at their Will and Pleasure; which Seal shall always be deposited with the President, or Senior Fellow.

*Seal*

*And furthermore,* By the Authority aforesaid, It is hereby Enacted, Ordained and Declared, That it is now, and at all Times hereafter shall continue to be the unalterable Constitution of this College, or University, that the Corporation thereof shall consist of Two Branches, to wit: That of the Trustees, and that of the Fellowship, with distinct, separate, and respective Powers: And that the Number of the Trustees shall, and may be Thirty-six; of which Twenty-two shall forever be elected of the Denomination called Baptists, or Antipædobaptists; Five shall forever be elected of the Denomination called Friends, or Quakers; Four shall forever be elected of the Denomination called Congregationalists, and Five shall forever be elected of the Denomination called Episcopalians: And that the Succession in this Branch shall be forever chosen and filled up from the respective Denominations in this Proportion, and according to these Num-

*Corporation with two branches*

*Number and denomination of the Trustees*

bers; which are hereby fixed, and shall remain to Perpetuity immutably the same. And that the said Stephen Hopkins, Joseph Wanton, Samuel Ward, William Ellery, John Tillinghast, Simon Pease, James Honyman, Nicholas Easton, Nicholas Tillinghast, Darius Sessions, Joseph Harris, Francis Willett, Daniel Jenckes, George Hazard, Nicholas Brown, Jeremiah Niles, John G. Wanton, Joshua Clarke, Gardner Thurston, John Greaves, John Maxson, John Gano, Samuel Winsor, Isaac Eaton, Samuel Stillman, Russel Mason, Elisha Reynolds, Josias Lyndon, Job Bennet, Ephraim Bowen, John Taylor, Jonathan Slade, Robert Shettell Jones, Azariah Dunham, Edward Thurston Junr, and Peleg Barker, or such, or so many of them as shall qualify themselves as aforesaid, shall be, and they are hereby declared and established the first and present Trustees. And that the Number of the Fellows, inclusive of the President (who shall always be a Fellow) shall and may be Twelve; of which Eight shall be forever elected of the Denomination called Baptists, or Antipædobaptists; and the rest indifferently of any or all Denominations. And that the Rev. Edward Upham, the Rev. Jeremiah Condy, the Rev, Marmaduke Brown, the Rev. Morgan Edwards, the Rev, Ezra Stiles, the Rev, Samuel Jones, the Rev, James Manning, William Logan Esq; Joshua Babcock Esq; Mr Thomas Eyres, and Mr. Thomas Haszard, or such, or so many of them as shall qualify themselves as aforesaid, shall be, and they are hereby declared the first and present Fellows and Fellowship, to whom the President, when hereafter elected, (who shall forever be of the Denomination called Baptists or Antipædobaptists) shall be joined to compleat the Number.

*Original Trustees*

*Number and denomination of the Fellows*

*Original Fellows*

*And furthermore*, It is Declared and Ordained, That the Succession in both Branches, shall at all Times hereafter be filled up and supplied according to these Numbers, and this established and invariable Proportion from the respective Denominations by the separate Election of both Branches of this Corporation, which shall at all Times sit and act by separate and distinct Powers: And in general, in Order to the Validity and Consummation of all Acts, there shall be in the Exercise of their respective separate and distinct Powers, the joint Con-

*Relative numbers always the same*

*Concurrent action of Trustees and Fellows*

currence of the Trustees and Fellows, by their respective Majorities, except in adjudging and conferring the Academical Degrees, which shall forever belong, exclusively, to the Fellowship as a learned Faculty.

*Degrees*

*And furthermore*, It is Constituted, That the Instruction and immediate Government of the College shall forever be, and rest in the President and Fellows or Fellowship.

*Government by the President and Fellows*

*And furthermore*, It is Ordained, That there shall be a general Meeting of the Corporation on the First Wednesday in September annually, within the College Edifice, and until the same be built, at such Place as they shall appoint, to consult, advise and transact the Affairs of the College or University: At which or at any other Time, the Public Commencement may be held and celebrated. And that on any special Emergencies, the President, with any Two of the Fellows, or any Three of the Fellows, exclusive of the President, may convoke, and they are hereby empowered to convoke an Assembly of the Corporation on Twenty Days Notice: And that in all Meetings, the major Vote of those present of the Two Branches respectively, shall be deemed their respective Majorities aforesaid: Provided, That not less than Twelve of the Trustees, and Five of the Fellows, be a Quorum of their respective Branches. That the President, or, in his Absence, the Senior Fellow present, shall always be Moderator of the Fellows: That the Corporation, at their annual Meetings, once in Three Years, or oftener in Case of Death or Removal, shall, and may choose a Chancellor of the University, and Treasurer, from among the Trustees, and a Secretary from among the Fellows: That the Nomination of the Chancellor shall be in the Trustees, whose Office shall be only to preside as a Moderator of the Trustees; and that in his Absence, the Trustees shall choose a Moderator for the Time being, by the Name of Vice-Chancellor: and at any of their Meetings, duly formed as aforesaid, shall and may be elected a Trustee or Fellow, or Trustees, or Fellows, in the Room of those nominated in this

*Annual Meeting*

*Special Meetings*

*Quorum*

*Moderator of Fellows*

*Chancellor, Treasurer and Secretary chosen triennially*

*Vice-Chancellor*

Charter, who may refuse to accept, or in the Room of those who may die, resign, or be removed.

*Vacancies to be filled*

*And furthermore*, It is Enacted, Ordained and Declared, That this Corporation, at any of their Meetings, regularly convened as aforesaid, shall and may elect and appoint the President and Professor of Languages, and the several Parts of Literature: And upon the Demise of him or them, or either of them, their Resignation or Removal from his or their Office, for Misdemeanor, Incapacity, or Unfaithfulness, (for which he or they are hereby declared removable by this Corporation) others to elect and appoint in their Room and Stead: And at such Meeting, upon the Nomination of the Fellows, to elect and appoint Tutors, Stewards, Butlers, and all such other Officers usually appointed in Colleges or Universities, as they shall find necessary, and think fit to appoint for the promoting liberal Education, and the well ordering the Affairs of this College; and them or any of them, at their Discretion to remove, and substitute others in their Places. And in Case any President, Trustee or Fellow, shall see Cause to change his religious Denomination, the Corporation is hereby empowered to declare his or their Place or Places vacant, and may proceed to fill up it or them accordingly, as before directed, otherwise each Trustee and Fellow, not an Officer of Instruction, shall continue in his Office during Life, or until Resignation. And further, in Case either of the religious Denominations should decline taking a Part in this Catholic, comprehensive and liberal Institution, the Trustees and Fellows shall and may compleat their Number, by electing from their respective Denominations, always preserving their respective Proportions herein before prescribed and determined: And all Elections shall be by Ballot or written Suffrage: And that a Quorum of Four Trustees & Three Fellows may transact any Business, excepting placing the College Edifice, Election of Trustees, President, Fellows and Professors, that is to say, so that their Acts shall be of Force and Validity until the next annual Meeting, and no longer.

*Election of President and Professors*

*Appointment of other officers*

*Vacancy by change of denomination*

*Elections by ballot*

*Minor quorum*

*And* it is further Enacted and Ordained by the Authority aforesaid, That each Trustee and Fellow, as well those nominated in

this Charter, as all that shall hereafter be duly elected, shall, previous to their acting in a corporate Capacity, take the Engagement of Allegiance prescribed by the Law of this Colony, to his Majesty King George the Third, His Heirs and Rightful Successors to the Crown of Great-Britain, which Engagement shall be administered to the present Trustees and Fellows, by the Governor or Deputy-Governor of this Colony, and to those from Time to Time hereafter elected by their respective Moderators, who are hereby empowered to administer the same.‡

*Engagement*

*And* still more clearly to define and ascertain the respective Powers of the Two Branches, on making and enacting Laws, It is further Ordained and Declared, That the Fellowship shall have Power, and are hereby empowered from Time to Time, and at all Times hereafter, to make, enact and publish all such Laws, Statutes, Regulations and Ordinances, with Penalties, as to them shall seem meet, for the successful Instruction and Goverment of said College or University, not contrary to the Spirit, Extent, true Meaning and Intention of the Acts of the British Parliament, or the Laws of this Colony; and the same Laws, Statutes and Ordinances to repeal: Which Laws, and the Repeals thereof, shall be laid before the Trustees, and with their Approbation shall be of Force and Validity, but not otherwise. And further the Trustees and Fellows, at their Meetings aforesaid, shall ascertain the Salaries of the respective Officers, and order the Monies assessed on the Students for Tuition, Fines and incidental Expenses, to be collected by the Steward, or such other Officer as they shall appoint to collect the same; and the same with their Revenues, and other College Estates in the Hands of the Treasurer, to appropriate in discharging Salaries and other College Debts: And the College Accounts shall be annually auditted and adjusted in the Meeting of the Corporation.

*Laws of the College*

*Salaries of officers*

*Audit of accounts*

*And furthermore*, It is hereby Enacted and Declared, That

‡ *September 4, 1782, the Corporation by vote omitted from the engagement the acknowledgment of allegiance to the British crown. The form of engagement has since been modified at various times; the present form is as follows: You* [*person's name*] *being elected a member of this Corporation to the place of* [*Fellow or Trustee*] *do solemnly engage true allegiance to bear to the United States of America, and faithfully to discharge the duties of your present appointment: And this engagement you make and give on the peril of the penalty of perjury.*

into this liberal and catholic Institution shall never be admitted any religious Tests: But on the contrary, all the Members hereof shall forever enjoy full, free, absolute, and uninterrupted Liberty of Conscience: And that the Places of Professors, Tutors, and all other Officers, the President alone excepted, shall be free and open for all Denominations of Protestants: And that Youth of all religious Denominations shall and may be freely admitted to the equal Advantages, Emoluments and Honors of the College or University; and shall receive a like, fair, generous, and equal Treatment during their Residence therein, they conducting themselves peaceably, and conforming to the Laws and Statutes thereof. And that the public Teaching shall, in general, respect the Sciences; and that the Sectarian Differences of Opinions, shall not make any Part of the public and classical Instruction: Although all religious Controversies may be studied freely, examined and explained by the President, Professors, and Tutors, in a personal, separate and distinct Manner, to the Youth of any or each Denomination: And above all, a constant Regard be paid to, and effectual Care taken of, the Morals of the College.

*No religious tests*

*And furthermore*, for the Honor and Encouragement of Literature, we Constitute and Declare, the Fellowship aforesaid, a Learned Faculty; and do hereby give, grant unto, and invest them, and their Successors, with full Power and Authority, and they are hereby authorized and empowered, by their President, and in his Absence by the Senior Fellow, or One of the Fellows appointed by themselves at the anniversary Commencement, or at any other Times, and at all Times hereafter, to admit to, and confer any and all the learned Degrees, which can or ought to be given and conferred in any of the Colleges or Universities in America; or any such other Degrees of literary Honor as they shall devise, upon any and all such Candidates and Persons as the President and Fellows, or Fellowship, shall judge worthy of the Academical Honors: Which Power of conferring Degrees is hereby restricted to the learned Faculty, who shall or may issue Diplomas or Certificates of such Degrees, or confer Degrees by Diplomas, and authenticate them with the Public Seal of the Corporation, and the Hands of the President and Secretary, and of all the Professors, as Witnesses, and deliver them to the graduates as honorable and perpetual Testimonies.

*Fellows to confer degrees*

*Diplomas granted*

*And furthermore*, for the greater Encouragement of this Seminary of Learning, and that the same may be amply endowed and enfranchised with the same Privileges, Dignities, and Immunities enjoyed by the American Colleges, and European Universities, We do Grant, Enact, Ordain, and Declare, And it is hereby Granted, Enacted, Ordained, and Declared, That the College Estate, the Estates, Persons, and Families of the President and Professors, for the Time being, lying and being within the Colony, with the Persons of the Tutors and Students, during their Residence at the College, shall be freed and exempted from all Taxes,‡ serving on Juries, and menial Services: And that the Persons aforesaid shall be exempted from

*Exemption from taxation, &c.*

‡ *February 11, 1863, the Corporation voted as follows:*

WHEREAS the General Assembly of the State of Rhode Island at its present session on the 11th day of February 1863, has passed an Act the principal Section of which is in the following words viz: Section 1. The Corporation of Brown University in Providence consenting hereto that the estates, persons and families of the President and Professors for the time being, and their successors in office, shall not hereafter be freed and exempted from taxes for more than the amount of Ten Thousand dollars for each of such officers, his estates persons and family included.

And Whereas the Institution of Brown University, was established by its founders, was incorporated with liberal franchises by the State, has been maintained solely by private benefactions; all uniting for the same noble object, that is, to create and promote a seminary of religion and learning within this state whose beneficent influences should be diffused, at home and abroad through all time.

And Whereas those influences can, and will be most happily diffused and continued by a cordial good will and a harmonious coöperation between the General Assembly and citizens of this State and the University.

And Whereas the General Assembly by its Act aforesaid has expressed the opinion that the President and Professors should bear a portion of the burdens of taxation from which they are exempted by our charter, and has made the validity of its said Act to depend upon the consent of this Corporation thereto, thereby affirming and maintaining the inviolability of said Charter.

THEREFORE, in order to manifest our cordial compliance with a reasonable wish of the General Assembly as expressed in said Act, It is hereby Voted and declared by the Corporation of Brown University, that being authorized by the President and Professors of said University, this Corporation does in behalf of the President and Professors and in behalf of this Corporation consent to the said Act passed by the General Assembly of the State of Rhode Island at its present session, as aforesaid—and the Secretary of this Corporation is hereby instructed to file a copy of this vote under the seal of the Corporation and certified by himself in the Office of the Secretary of State, as proof of the consent of this Corporation thereto.

The above Report was accepted and the Vote was adopted unanimously.

bearing Arms, Impresses and Military Services, except in case of an Invasion.

*And furthermore*, for establishing the Perpetuity of this Corporation, and in Case that at any Time hereafter, through Oversight, or otherwise through Misapprehensions, and mistaken Constructions of the Powers, Liberties and Franchises herein contained, any Laws should be enacted, or any Matters done and transacted by this Corporation contrary to the Tenor of this Charter, It is hereby Enacted, Ordained and Declared, That all such Laws, Acts, and Doings, shall be in themselves null and void: Yet, Nevertheless, the same shall not in any Courts of Law, or by the General Assembly, be deemed, taken, interpreted, or adjudged into an Avoidance, Defeazance or Forfeiture of this Charter: But that the same shall be, and remain unhurt, inviolate, and entire unto the said Corporation, in perpetual Succession: Which Corporation may, at all Times, and forever hereafter proceed and continue to act: And all their Acts, conformable to the Powers, Tenor, true Intent and Meaning of the Charter, shall be, and remain in full Force and Validity, the Nullity and Avoidance of any such illegal Acts to the contrary in any wise notwithstanding.

*Perpetuity of the Corporation*

*And lastly*, We the Governor and Company aforesaid, Do, for ourselves and our Successors, forever hereby Enact, Grant and Confirm unto the said Trustees and Fellows, and to their Successors, That this Charter of Incorporation, and every Part thereof, shall be good and available in all Things in the Law, according to our true Intent and Meaning: And shall be construed, reputed, and adjudged in all Cases most favorably on the Behalf and for the best Benefit and Behoof of the said Trustees and Fellows, and their Successors, so as most effectually to answer the valuable Ends of this useful Institution.

*Charter for the benefit of the Corporation and the College*

*In* full Testimony of which Grant, and of all the Articles and Matters therein contained, the said Governor and Company do hereby order, That this Act shall be signed by the Governor and Secretary, and sealed with the Public Seal of this Colony, and registered in the Colony's Records: And that the same, or an Exemplification thereof, shall be

*Signed and sealed*

a sufficient Warrant to the said Corporation to hold, use and exercise all the Powers, Franchises, and Immunities herein contained.

*In Conformity to the above Act, SAMUEL WARD, ESQ; Governor, Captain-General, and Commander in Chief, of and over the Colony aforesaid doth hereunto subscribe his Name, and hath caused the Seal of said Colony to be affixed the Twenty-fourth Day of October One Thousand Seven Hundred and Sixty-five, and in the Fifth Year of the Reign of his Most Sacred Majesty George the Third by the Grace of God King of Great Britain, &c.*

SAM: WARD

By His Honor's Command
EDWD THURSTON jun D: Secry.

# ADMISSION TO THE UNIVERSITY

## METHODS OF ADMISSION TO THE FRESHMAN CLASS ‡

I. ENTRANCE EXAMINATIONS CONDUCTED BY THE UNIVERSITY. Examinations for admission to the Freshman class are given by the University in September at the times and places indicated below. The University no longer offers entrance examinations in June; candidates desiring to be examined in June must take the examinations conducted under the supervision of the College Entrance Examination Board, for which see page 42. A candidate may, at his option, take all his examinations in June or in September, or he may take part in June and part in September. Before taking any examination conducted by the University, a candidate must present to the Registrar a letter of recommendation from the principal of his preparatory school and secure a card admitting him to the examination. This may be done by correspondence, provided that the written application and the recommendation are received not less than one week before the date of the first examination.

If a candidate offers subjects in excess of those required for admission, he may be examined in them at the times scheduled below and receive credit for them as college studies.

Any of these examinations may be taken one year before the candidate expects to enter college.

The order of the examinations in 1913 will be as follows:

WEDNESDAY, SEPTEMBER 17

*Algebra*, Sayles Hall, 8 a.m. to 10 a.m.
*Plane Geometry*, Sayles Hall, 10 a.m. to 12 m.
*Elementary French*, Sayles Hall, 1 p.m. to 3 p.m.
*Advanced French*, Sayles Hall, 3.30 p.m. to 5.30 p.m.

THURSDAY, SEPTEMBER 18

*English A*, Sayles Hall, 8 a.m. to 10 a.m.
*English B*, Sayles Hall, 10 a.m. to 12 m.
*Elementary Latin*, Sayles Hall, 1 p.m. to 3 p.m.
*Advanced Latin*, Sayles Hall, 3 p.m. to 4.30 p.m.
*American History*, Sayles Hall, 5 p.m. to 7 p.m.

FRIDAY, SEPTEMBER 19

*Elementary German*, Sayles Hall, 8 a.m. to 10 a.m.
*Advanced German*, Sayles Hall, 10 a.m. to 12 m.
*Chemistry*, Sayles Hall, 1 p.m. to 3 p.m.

‡ For methods of making up entrance deficiencies see pages 79, 80.

*Astronomy*, Sayles Hall, 3.15 p.m. to 5.15 p.m.
*Physiography*, Sayles Hall, 5.30 p.m. to 7.30 p.m.

SATURDAY, SEPTEMBER 20

*Plane Trigonometry*, Sayles Hall, 8 a.m. to 10 a.m.
*Solid Geometry*, Sayles Hall, 10 a.m. to 12 m.
*Botany*, Sayles Hall, 8 a.m. to 10 a.m.
*Greek and Roman History*, Sayles Hall, 1 p.m. to 3 p.m.
*Physics*, Sayles Hall, 4 p.m. to 6 p.m.

MONDAY, SEPTEMBER 22

*Elementary Greek*, Sayles Hall, 8 a.m. to 10 a.m.
*Advanced Greek*, Sayles Hall, 10 a.m. to 11.30 a.m.
*English History*, Sayles Hall, 12.30 p.m. to 2.30 p.m.
*Medieval and Modern History*, Sayles Hall, 3 p.m. to 5 p.m.

II. ENTRANCE EXAMINATIONS CONDUCTED BY THE COLLEGE ENTRANCE EXAMINATION BOARD. Examinations conducted under the supervision of the College Entrance Examination Board are accepted in place of the corresponding examinations conducted by Brown University. In 1913 these examinations will be held June 16–21.

All applications for these examinations must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, and must be made upon a blank form to be obtained from the Secretary of the Board. Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St Louis, and other points on the Mississippi River, must be received by the Secretary of the Board on or before Monday, June 2, 1913; applications for examination elsewhere in the United States or in Canada must be received on or before Monday, May 26, 1913; and applications for examinations at points outside the United States and Canada must be received on or before Monday, May 12, 1913. Applications received later than the dates named will be accepted when it is possible to arrange for the examinations of the candidates concerned, but only upon the payment of $5 in addition to the regular fee.

The examination fee is $5 for all candidates examined at points in the United States and Canada, and $15 for all candidates examined at points outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York, to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board in June, 1913, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

III. ADMISSION BY CERTIFICATE. In place of examinations, certificates are accepted from any school which has the privilege of issuing certificates to Brown University.

Principals of schools in New England who desire the certificate privilege for Brown University, or for any other college which is a member of the New England College Entrance Certificate Board, should address the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown Street, Providence, R. I., who will furnish the necessary application blanks. These blanks must be returned to him before April 1 of the year for which the certificate privilege is desired.

Principals of schools situated outside of New England who desire the certificate privilege must make application to the Registrar of the University before May 1, and must furnish satisfactory evidence that the course of study in the school meets the requirements for admission. Blank forms for this purpose will be supplied on request. Certificates from the New York Board of Regents are accepted for the specified subjects so far as they coincide with the entrance requirements of Brown University.

Certificates are accepted for admission to the Freshman class only, not for admission to advanced standing. If any candidate offers subjects in excess of those required for admission, he may be examined in them at the times indicated on pages 41, 42, and receive credit for them as college studies.

Blank forms for the certification of candidates may be obtained from the Registrar by the principals of schools having the privilege of certification. These forms should be filled out and returned to him by July 1. When a student has attended more than one school, a letter of recommendation from the principal of the school last attended must accompany the certificate.

## ENTRANCE REQUIREMENTS FOR THE VARIOUS DEGREES

UNITS OF ENTRANCE REQUIREMENTS. A unit in any subject represents a year's study, constituting approximately a quarter of a full year's work in a secondary school.

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes the four-year high school course as a basis, and assumes that the length of the school year is from thirty-six to forty weeks, that a period is from forty to sixty minutes in length, and that the study is pursued for four or five periods a week; but under ordinary circumstances, a satisfactory year's work in any subject cannot be accomplished in less than one hundred and twenty sixty-minute periods or their equivalent. Schools organized on any other than a four-year basis can, nevertheless, estimate their work in terms of this unit.

The scale of values of admission requirements in terms of units is as fol-

lows, and is identical with that adopted by the College Entrance Examination Board:

| | *Units* | | *Units* |
|---|---|---|---|
| English *a* | 2 | Intermediate French | 1 |
| English *b* | 1 | Elementary German | 2 |
| Ancient History | 1 | Intermediate German | 1 |
| Medieval and Modern European History | 1 | ‡ Spanish | 2 |
| | | Algebra | 1½ |
| English History | 1 | Plane Geometry | 1 |
| American History and Civil Government | 1 | Solid Geometry | ½ |
| | | Plane Trigonometry | ½ |
| Elementary Latin | 3 | Physics | 1 |
| Advanced Latin | 1 | Chemistry | 1 |
| ‡ Two-year Latin | 2 | ‡ Botany | 1 |
| Elementary Greek | 2 | Physiography | 1 |
| Advanced Greek | 1 | ‡ Astronomy | 1 |
| Elementary French | 2 | | |

FOR THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF PHILOSOPHY. Candidates must present fourteen and one-half units from the subjects described on pages 45–60. Not more than two units may be offered in History without special permission from the Committee on Registration and Attendance. If Latin is presented, it must be for at least three units (see page 52); if Greek, for at least two units (see page 53). Solid Geometry and Plane Trigonometry must be presented together. A substitute for an optional subject may be accepted if the Committee is convinced that it is a full equivalent.

Candidates for the degree of Bachelor of Arts must present English, Algebra, Plane Geometry, Greek and Roman History, and eight units in addition, seven of which must be in languages other than English, and must include the elementary and advanced requirements in at least one ancient language.

Candidates for the degree of Bachelor of Philosophy must present English, Algebra, Plane Geometry, one unit in History, and eight units in addition, of which five must be in languages other than English, and must include one modern language.

FOR THE DEGREE OF BACHELOR OF SCIENCE.‡ (For students entering in 1913.) Candidates must present twelve units from the subjects described on pages 45–60. These must include English, Algebra, Plane Geometry, Solid Geometry, one unit in History, and five units in addition, three of which must be in French, German, or Chemistry, or in any two of them. Two units in subjects not included in the list above may be accepted if the Committee on Registration and Attendance is convinced that they are full equivalents.

‡ Two-year Latin, Spanish, Botany, and Astronomy may be presented by candidates for the degree of Bachelor of Science only.

NEW REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE.‡ For Students entering in 1914

Candidates must present fourteen units from the subjects described on pages 45–60. These must include English, Algebra, Plane Geometry, Solid Geometry, one unit in History, four units (one of which must be in Chemistry or Physics) from the following subjects: French, German, Spanish, Chemistry, Physics; and three units in addition. Applicants for admission who have had extensive training in Freehand Drawing, and who, by presentation of properly certified plates to the Committee on Registration and Attendance, give evidence of exceptional ability in this work, may offer Freehand Drawing for one of these additional units. Two units in subjects not included in the list on page 44 may be accepted if the Committee on Registration and Attendance is convinced that they are full equivalents.

## ENTRANCE REQUIREMENTS IN THE SEVERAL SUBJECTS§

ENGLISH. *Three units.* Preparation in English has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

Grammar and Composition. The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles governing punctuation, diction, paragraphs, and the whole composition should be carefully studied; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise narration, description, and easy exposition and argument based upon simple outlines. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

Literature. In the pursuit of the second object the student is required to read certain books chosen from two lists, headed respectively *Reading* and *Study.*

‡ The Degree of Bachelor of Science is given in Brown University only for engineering courses. The work is mainly technical and offers no freedom of election.

§ The following statements are condensations of those in the Report of the College Entrance Examination Board. Teachers are advised to consult this report.

In connection with both lists the student should be trained in reading aloud, and should be encouraged to commit to memory some of the more notable passages both in verse and in prose.

### For Students entering in 1913 and 1914

#### *Reading*

The aim of this part of the requirement is to foster in the student the habit of intelligent reading and to develop a taste for good literature. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and the charm of what he reads. The books are arranged in the following groups, from which at least ten units are to be selected, two from each group:

1. The *Old Testament*, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the *Aeneid*. The *Odyssey*, *Iliad*, and *Aeneid* should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

2. Shakspere: *Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.*

3. Defoe: *Robinson Crusoe*, Part I; Goldsmith: *The Vicar of Wakefield;* Scott: *Ivanhoe* or *Quentin Durward;* Hawthorne: *The House of the Seven Gables;* Dickens: *David Copperfield* or *A Tale of Two Cities;* Thackeray: *Henry Esmond;* Mrs. Gaskell: *Cranford;* George Eliot: *Silas Marner;* Stevenson: *Treasure Island.*

4. Bunyan: *Pilgrim's Progress*, Part I; *The Sir Roger de Coverley Papers* in *The Spectator;* Franklin: *Autobiography* (condensed); Irving: *Sketch Book;* Macaulay: *Essays on Lord Clive* and *Warren Hastings;* Thackeray: *English Humourists;* Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, with a brief memoir or estimate of Lincoln; Parkman: *The Oregon Trail;* either Thoreau: *Walden*, or Huxley: *Autobiography* and selections from *Lay Sermons*, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; Stevenson: *An Inland Voyage* and *Travels with a Donkey.*

5. Palgrave: *Golden Treasury* (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Gray: *Elegy in a*

*Country Churchyard*, and Goldsmith: *The Deserted Village;* Coleridge: *The Ancient Mariner*, and Lowell: *The Vision of Sir Launfal;* Scott: *The Lady of the Lake;* Byron: *Childe Harold*, Canto IV, and *The Prisoner of Chillon;* Palgrave: *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe: *The Raven;* Longfellow: *The Courtship of Miles Standish*, and Whittier: *Snow-Bound;* Macaulay: *Lays of Ancient Rome*, and Arnold: *Sohrab and Rustum;* Tennyson: *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur;* Browning: *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *An Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City.*

*Study*

This part of the requirement is intended as a natural and logical continuation of the student's earlier reading. Greater stress is laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. For this close reading are provided a play, a group of poems, an oration, and an essay, as follows:

Shakspere: *Macbeth;* Milton: *L' Allegro*, *Il Penseroso*, and *Comus;* Burke: *Speech on Conciliation with America*, or Washington: *Farewell Address* and Webster: *First Bunker Hill Oration;* Macaulay: *Life of Johnson*, or Carlyle: *Essay on Burns.*

The examination for 1913 and 1914 will be divided into two parts, the first of which (English *a*, two units) may be taken as a preliminary, the second (English *b*, one unit) as a final.

The first part of the examination will be upon ten units chosen, in accordance with the plan described earlier, from the lists headed *Reading;* it will include also questions upon grammar and the simpler principles of rhetoric, and a short composition upon some topic drawn from the student's general knowledge or experience. On the books prescribed for reading, the examination will usually consist of the writing of short paragraphs on several topics which the candidate may choose out of a considerable number. These topics will involve such knowledge and appreciation of plot, character-development, and other qualities of style and treatment as may be fairly expected of boys and girls. In grammar and rhetoric, the candidate will be asked to construe sentences, to parse individual words, and to correct mistakes in usage.

The second part of the examination will be upon the books prescribed for study. It will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives

of the authors, their other works, and the periods of literary history to which they belong.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

## For Students entering 1915 to 1919

### *Reading*

The aim of this part of the requirement is to foster in the student the habit of intelligent reading and to develop a taste for good literature. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and the charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group I.

Group I. Classics in Translation. The *Old Testament*, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the *Aeneid*. The *Odyssey*, *Iliad*, and *Aeneid* should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

Group II. Drama. Shakspere: *A Midsummer Night's Dream; The Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard the Second; Richard the Third; Henry the Fifth; Coriolanus; Julius Caesar;*‡ *Macbeth;*‡ *Hamlet.*‡

Group III. Prose Fiction. Malory: *Morte d'Arthur* (about 100 pages); Bunyan: *Pilgrim's Progress*, Part I; Swift: *Gulliver's Travels* (voyages to Lilliput and Brobdingnag); Defoe: *Robinson Crusoe*, Part I; Goldsmith: *The Vicar of Wakefield;* Frances Burney: *Evelina;* Scott's Novels, any *one;* Jane Austen's Novels, any *one;* Maria Edgeworth: *Castle Rackrent* or *The Absentee;* Dickens's Novels, any *one;* Thackeray's Novels, any *one;* George Eliot's Novels, any *one;* Mrs. Gaskell: *Cranford;* Kingsley: *Westward Ho!* or *Hereward, the Wake;* Reade: *The Cloister and the Hearth;* Blackmore: *Lorna Doone;* Hughes: *Tom Brown's School Days;* Stevenson: *Treasure Island*, or *Kidnapped*, or *The Master of Ballantrae;* Cooper's Novels, any *one;* Poe: *Selected Tales;* Hawthorne: *The House of the Seven Gables*, or *Twice Told Tales*, or *Mosses from an Old Manse;* a collection of short stories by various standard writers.

‡ If not chosen under *Study*.

GROUP IV. ESSAYS, BIOGRAPHY, ETC. Addison and Steele: *The Sir Roger de Coverley Papers* or selections from *The Tatler* and *The Spectator* (about 200 pages); Boswell: Selections from the *Life of Johnson* (about 200 pages); Franklin: *Autobiography;* Irving: Selections from the *Sketch Book* (about 200 pages), or *Life of Goldsmith;* Southey: *Life of Nelson;* Lamb: Selections from the *Essays of Elia* (about 100 pages); Lockhart: Selections from the *Life of Scott* (about 200 pages); Thackeray: Lectures on *Swift*, *Addison*, and *Steele* in the *English Humourists;* Macaulay: Any *one* of the following essays: *Lord Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederic the Great*, *Madame d'Arblay;* Trevelyan: Selections from the *Life of Macaulay* (about 200 pages); Ruskin: *Sesame and Lilies* or selections (about 150 pages); Dana: *Two Years before the Mast;* Lincoln: Selections, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, the Letter to Horace Greeley, together with a brief memoir or estimate of Lincoln; Parkman: *The Oregon Trail;* Thoreau: *Walden;* Lowell: Selected Essays (about 150 pages); Holmes: *The Autocrat of the Breakfast Table;* Stevenson: *An Inland Voyage* and *Travels with a Donkey;* Huxley: *Autobiography* and selections from *Lay Sermons*, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; a collection of Essays by Bacon, Lamb, De Quincey, Hazlitt, Emerson, and later writers; a collection of Letters by various standard writers.

GROUP V. POETRY. Palgrave: *Golden Treasury* (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave: *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen under *Study*); Goldsmith: *The Traveller* and *The Deserted Village;* Pope: *The Rape of the Lock;* a collection of English and Scottish ballads, as, for example, some *Robin Hood* ballads, *The Battle of Otterburn*, *King Estmere*, *Young Beichan*, *Bewick and Grahame*, *Sir Patrick Spens*, and a selection from later ballads; Coleridge: *The Ancient Mariner*, *Christabel*, and *Kubla Khan;* Byron: *Childe Harold*, Canto III or IV, and *The Prisoner of Chillon;* Scott: *The Lady of the Lake* or *Marmion;* Macaulay: *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, *Ivry;* Tennyson: *The Princess*, or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur;* Browning: *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *An Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*, *The Italian in England*, *The Patriot*, *The Pied Piper*, "*De Gustibus*"—, *Instans Tyrannus;* Arnold: *Sohrab and Rustum* and *The Forsaken Merman;* selections from American poetry, with especial attention to Poe, Lowell, Longfellow, and Whittier.

*Study*

This part of the requirement is intended as a natural and logical continuation of the student's earlier reading. Greater stress is laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. For this close reading the books are arranged in four groups, from each of which one selection is to be made.

GROUP I. DRAMA. Shakspere: *Julius Caesar; Macbeth; Hamlet.*

GROUP II. POETRY. Milton: *L' Allegro, Il Penseroso,* and either *Comus* or *Lycidas;* Tennyson: *The Coming of Arthur, The Holy Grail,* and *The Passing of Arthur;* the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury* (First Series).

GROUP III. ORATORY. Burke: *Speech on Conciliation with America;* Macaulay: *Speech on Copyright,* and Lincoln: *Speech at Cooper Union;* Washington: *Farewell Address,* and Webster: *First Bunker Hill Oration.*

GROUP IV. ESSAYS. Carlyle: *Essay on Burns,* with a selection from Burns's Poems; Macaulay: *Life of Johnson;* Emerson: *Essay on Manners.*

The examination (after 1914) will be divided into two parts, one of which will be on grammar and composition, and the other on literature.

In grammar and composition, the candidate may be asked to construe sentences, to parse individual words, and to correct mistakes in usage. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. For this purpose several subjects, perhaps eight or ten, will be indicated, from which the candidate may make his own selections.

The examination in literature will include: (1) General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined under *Reading* above. The candidate will be required to submit a list of the books read in preparation for the examination, certified by the principal of the school in which he was prepared; but this list will not be made the basis of detailed questions. (2) A test on the books prescribed for study. This will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

The requirements for 1913 and 1914 are the same as those of the College Entrance Examination Board in English.

MATHEMATICS. Algebra. *One and one-half units.* The requirement in Algebra covers the work through equations of the second degree, including the following subjects: the four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; the binomial theorem for positive integral exponents; the formulae for the *n*th term, and the sum of the terms, of arithmetical and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *a* (i and ii).

Plane Geometry. *One unit.* The requirement in Plane Geometry includes the usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Teachers of Geometry should lay stress on accuracy of statement and elegance of form as well as on clear and strict reasoning. Mere memorizing should be avoided. Special care should be taken that in the proof of a proposition no lines be drawn unless their construction is proved to be possible.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *c*.

Solid Geometry. *One-half unit.* The requirement in Solid Geometry covers the usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *d*.

Plane Trigonometry. *One-half unit.* The requirement in Plane Trigonometry

includes definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulae, in particular for the sine, cosine, and tangent of the sum and difference of two angles, of the double angle and half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulae; the solution of trigonometric equations of a simple character; the theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles; practical applications.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *f*.

LATIN. Elementary Latin. *Three units.* The Latin reading without the prescription of particular authors and works shall not be less in amount than Caesar, *Gallic War*, Books I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias. The reading shall be selected from the following authors and works: Caesar, *Gallic War* and *Civil War*, and Nepos, *Lives;* Cicero, orations, letters, and *De Senectute*, and Sallust, *Catiline* and *Jugurthine War.*

Candidates will be examined in translation at sight of passages from Caesar and Cicero. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above. They will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

This requirement is practically the same as that of the College Entrance Examination Board in Latin *N R* 1, *N R* 2, *N R* 3, *N R* 4.

Advanced Latin. *One unit.* The Latin reading shall not be less in amount than Vergil, *Aeneid*, Books I-VI. This reading shall be selected from Vergil, *Bucolics*, *Georgics*, and *Aeneid*, and Ovid, *Metamorphoses*, *Fasti*, and *Tristia.*

Candidates will be examined in translation at sight of passages from Vergil and Ovid. They will be examined also upon the following prescribed reading: Vergil, *Aeneid*, Books I, II, and either IV or VI, at the option of the candidate. The examination will include questions on subject-matter and meter.

This requirement is practically the same as that of the College Entrance Examination Board in Latin *N R* 5.

Two-Year Latin. *Two units.* For candidates for the degree of Bachelor of Science only. The reading shall not be less in amount than Caesar, *Gallic War*, Books I-IV, and should be selected by the schools from Caesar, *Gallic War* and *Civil War*, and Nepos, *Lives*. Candidates will be examined in translation at sight of passages from the above authors, also in grammar and composition.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

This requirement is practically the same as that of the College Entrance Examination Board in Latin *N R* 1, *N R* 2, *N R* 3.

GREEK. Elementary Greek. *Two units.* The requirement in Elementary Greek includes: (1) Xenophon's *Anabasis*, Books I-IV, with attention not only to language, but to subject-matter as well; (2) grammar, including a familiar knowledge of inflection, word-formation, and ordinary syntax. This will be tested by: (*a*) questions on a passage from the *Anabasis;* (*b*) translation into Greek, with accents, of simple English sentences.

This requirement is the same as that of the College Entrance Examination Board in Greek *a* (i and ii), *b*, and *g*.

Advanced Greek. *One unit.* The requirement in advanced Greek includes: (1) Three books of Homer's *Iliad* or *Odyssey*, with questions on meter, Homeric dialect, etc., or (upon request four weeks in advance of the examination) an equivalent amount of a prose author; (2) translation at sight of simple Attic prose or Homer; (3) translation into Greek, with accents, of a continuous passage of English narrative, based upon material similar to the *Anabasis*.

This requirement is the same as that of the College Entrance Examination Board in Greek *c*, *f*, and *h*.

FRENCH. Elementary French. *Two units.* At the end of the elementary course the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of every-day life or based upon the portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

During the first year the work should comprise: Careful drill in pronunciation; the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to culti-

vate readiness in the reproduction of natural forms of expression; the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; writing from French dictation.

During the second year the work should comprise: The reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; constant practice, as in the previous year, in translating into French easy variations upon the texts read; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; writing French from dictation; continued drill upon the rudiments of grammar, with constant application in the construction of sentences; mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About's *Le roi des montagnes*, Bruno's *Le tour de la France*, Daudet's easier short tales, La Bédollière's *La Mère Michel et son chat*, Erckmann-Chatrian's stories, Foa's *Contes biographiques* and *Le petit Robinson de Paris*, Foncin's *Le pays de France*, Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*, Legouvé and Labiche's *La cigale chez les fourmis*, Malot's *Sans famille*, Mairet's *La tâche du petit Pierre*, Mérimée's *Colomba*, extracts from Michelet, Sarcey's *Le siège de Paris*, Verne's stories.

This requirement is the same as that of the College Entrance Examination Board in French *a*.

Intermediate French. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About's stories, Augier and Sandeau's *Le gendre de M. Poirier*, Béranger's poems, Corneille's *Le Cid* and *Horace*, Coppée's poems, Daudet's *La Belle-Nivernaise*, La Brète's *Mon oncle et mon curé*, Madame de Sévigné's letters, Hugo's *Hernani* and *La chute*, Labiche's plays, Loti's *Pêcheur d'Islande*, Mignet's historical writings, Molière's *L'avare* and *Le bourgeois gentilhomme*, Racine's *Athalie*, *Andromaque*, and *Esther*, George Sand's plays and stories, Sandeau's *Mademoiselle de la Seiglière*, Scribe's plays, Thierry's *Récits des temps mérovingiens*, Thiers's *L'expédition de Bonaparte en Egypte*, de Vigny's *La canne de jonc*, Voltaire's historical writings.

This requirement is the same as that of the College Entrance Examination Board in French *b*.

GERMAN. Elementary German. *Two units.* At the end of the elementary course the pupil should be able to read at sight, and to translate a passage of very easy dialogue or narrative prose, help being given upon unusual words and construction, to put into German short English sentences taken from the language of every-day life or based upon the text given for translation, and to answer questions upon the rudiments of the grammar, as defined below.

During the first year the work should comprise: Careful drill upon pronunciation; the memorizing and frequent repetition of easy colloquial sentences; drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

During the second year the work should comprise: The reading of from 150 to 200 pages of literature in the form of easy stories and plays; accompanying practice, as before, in the translation into German of easy variations upon the matter read and also in the offhand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil to use his knowledge with facility in the formation of sentences and to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder;* Arnold's *Fritz auf Ferien;* Baumbach's *Die Nonna* and *Der Schwiegersohn;* Gerstäcker's *Germelshausen;* Heyse's *L'Arrabbiata*, *Das Mädchen von Treppi*, and *Anfang und Ende;* Hillern's *Höher als die Kirche;* Jensen's *Die braune Erica;* Leander's *Träumereien* and *Kleine Geschichten;* Seidel's *Märchen;* Stökl's *Unter dem Christbaum;* Storm's *Immensee* and *Geschichten aus der Tonne;* Zschokke's *Der zerbrochene Krug.*

Good plays adapted to the elementary course are much harder to find than good stories. Five-act plays are too long. They require more time than it is advisable to devote to any one text. Among shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorzeichen;* Elz's *Er ist nicht eifersüchtig;* Wichert's *An der Majorsecke;* Wilhelmi's *Einer*

*muss heiraten.* It is recommended, however, that not more than one of these plays be read. The narrative style should predominate. A good selection of reading matter for the second year would be Andersen's *Märchen*, or *Bilderbuch*, or Leander's *Träumereien*, to the extent of about forty pages. After that such a story as *Das kalte Herze;* or *Der zerbrochene Krug;* then *Höher als die Kirche* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; lastly *Der Prozess.*

This requirement is the same as that of the College Entrance Examination Board in German *a.*

Intermediate German. *One unit.* At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation, and to translate and explain a passage of classical literature taken from some text previously studied.

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and subjunctive), and likewise upon word-order and word-formation.

The intermediate course is supposed to be the elementary course, plus one year's work at the rate of not less than four recitations a week. Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein;* Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit,*—for example, *Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen;* Fouqué's *Undine;* Gerstäcker's *Irrfahrten;* Goethe's *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffmann's *Historische Erzählungen;* Lessing's *Minna von Barnhelm;* Meyer's *Gustav Adolf's Page;* Moser's *Der Bibliothekar;* Riehl's *Novellen,*—for example, *Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger's *Waldheimat;* Schiller's *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel's *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch's *Das edle Blut.*

This requirement is the same as that of the College Entrance Examination Board in German *b.*

SPANISH. Elementary Spanish. *Two units.* At the end of the elementary course the pupil should be able to pronounce Spanish accurately, to read at

sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of every-day life or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as defined below.

During the first year the work should comprise: Careful drill in pronunciation; the rudiments of grammar, including the conjugation of the more regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; exercises containing illustrations of the principles of grammar; the reading and accurate rendering into good English of from 100 to 175 duodecimo pages of graduated texts, with translation into Spanish of easy variations of the sentences read; writing Spanish from dictation.

During the second year the work should comprise: The reading of from 250 to 400 pages of modern prose from different authors; practice in translating Spanish into English, and English variations of the text into Spanish; continued study of the elements of grammar and syntax; mastery of all but the rare irregular verb forms and of the simpler uses of the modes and tenses; writing Spanish from dictation; memorizing of easy short poems.

Suitable texts for the second year are: Valera's *El Pájaro verde;* Alarcón's *El final de Norma;* Valdès's *José;* Galdós's *Doña Perfecta, Marianela;* Padre Isla's version of *Gil Blas;* Carrion and Aza's *Zaragüeta.*

HISTORY. Ancient History. *One unit.* Special attention to Greek and Roman history, but including also a short introductory study of the more ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne (814).

Medieval and Modern European History. *One unit.* From the death of Charlemagne to the present time.

English History. *One unit.*

American History and Civil Government. *One unit.*

The examinations in history will be so framed as to require comparison and judgment on the pupil's part rather than mere memory. The examinations will presuppose the use of good text-books, at least 600 duodecimo pages of collateral reading, and practice in written work. Historical novels, plays, or poems will not be accepted in fulfilment of the requirement of collateral reading. The methods of instruction which the examinations in History and Civil Government presuppose are substantially identical with those set forth in *A History Syllabus for Secondary Schools* (D. C. Heath & Co.); and the references for collateral reading given in that manual may be taken as indications of the kind of collateral reading that should be done.

These requirements are the same as those of the College Entrance Examination Board in History *a, b, c, d.*

PHYSICS. *One unit.* Preparation in Physics should include: (1) The study of one standard text-book, for the purpose of obtaining a connected and comprehensive view of the subject. The student should be given opportunity and encouragement to consult other scientific literature. (2) Instruction by lecture-table demonstrations, to be used mainly for illustration of the facts and phenomena of physics in their qualitative aspects and in their practical applications. (3) Individual laboratory work, consisting of experiments requiring at least the time of thirty double periods. The experiments performed by each student should number at least thirty. The work should be so distributed as to give a wide range of observation and practice. The aim of laboratory work should be to supplement the pupil's fund of concrete knowledge and to cultivate his power of accurate observation and clearness of thought and expression. The exercises should be chosen with a view to furnishing forceful illustrations of fundamental principles and their practical applications. They should be such as yield results capable of ready interpretation, obviously in conformity with theory, and free from the disguise of unintelligible units. Slovenly work should not be tolerated, and the effort for precision should not lead to the use of apparatus or processes so complicated as to obscure the principle involved.

Throughout the whole course special attention should be paid to the common illustrations of physical laws and to their industrial applications.

In the solution of numerical problems, the student should be encouraged to make use of the simple principles of algebra and geometry to reduce the difficulties of solution, but unnecessary mathematical difficulties should be avoided, and care should be exercised to prevent the student from losing sight of the concrete facts in the manipulation of symbols.

Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Physics.

CHEMISTRY. *One unit.* The following outline includes only the indispensable topics which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by the teacher.

Outline. The chief physical and chemical characteristics, the preparation and the recognition of the following elements and their chief compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur,* phos-

phorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

More detailed study should be confined to the italicized elements and to a restricted list of compounds, such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, nitric acid, ammonia, sulphur dioxide, sulphuric acid, hydrogen-sulphide, sodium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, manufacturing processes, familiar substances (illuminating gas, explosives, baking powder, mortar, glass, steel, common alloys, porcelain, soap).

Combining proportions by weight and volume; calculations founded on these and on Boyle's and Charles's laws; symbols and nomenclature (with careful avoidance of special stress, since these are non-essential); atomic theory, atomic weights and valency in a very elementary way; nascent state; natural grouping of the elements; solution (solvents and solubility of gases, liquids, and solids; saturation); ionization; mass action and equilibrium; strength (=activity) of acids and bases; conservation and dissipation of energy; chemical energy (very elementary); electrolysis. Chemical terms should be defined and explained, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but should be taught only so far as is necessary for the correlation and explanation of the experimental facts.

It is recommended that the candidate's preparation in chemistry should include: (1) Individual laboratory work, comprising at least forty exercises; (2) instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations; (3) the study of at least one standard text-book, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Chemistry.

BOTANY. *One unit.* The course should include a careful study of the general principles of Anatomy and Morphology, Physiology, and Ecology; also the natural history of the plant groups, and classification.

Individual laboratory work by the student is essential and should receive at least double the amount of time given to recitation. Records of the laboratory work, properly certified by the teacher, in which stress is laid upon accurate drawing and precise description, must be presented at the time of examination.

Where special circumstances, such as exceptional difficulty of obtaining material, prevent the completion of the entire amount while allowing its equivalent in thoroughness, it is recommended that some of the minor topics be omitted rather than that the attempt be made to cover all more superficially. To provide for this possibility, the examination papers will always include a number of alternative questions.

This requirement is the same as that of the College Entrance Examination Board in Botany.

PHYSIOGRAPHY. *One unit.* The candidate's preparation should include: (1) The study of one of the leading secondary text-books in physical geography, that a knowledge may be gained of the essential principles, and of well-selected facts illustrating those principles; (2) individual laboratory work, comprising at least forty exercises. From one-third to one-half of the candidate's class-room work should be devoted to laboratory exercises. In the autumn and spring field trips should take the place of laboratory exercises. Properly attested reports of field and laboratory work must be presented at the time of examination.

This requirement is the same as that of the College Entrance Examination Board in Geography.

ASTRONOMY. *One unit.* The requirement in Astronomy demands class instruction in the elementary principles of the science, including observations of the heavens with reference to the positions and movements of the heavenly bodies. The following are the chief topics to be studied: *The Celestial Sphere;* designation of the directions of a heavenly body. *The Earth;* its axial rotation; time, latitude, longitude; its orbital revolution; precession; aberration, the seasons, equation of time, the calendar. *The Moon;* its axial rotation, orbital motion, librations, phases, surface features, physical condition; lunar and solar eclipses. *The Sun;* its rotation, physical characteristics, light, and heat. *The Planets;* apparent and real motions, individual characteristics. *The Law of Gravitation;* its control of the solar system; the tides. *Comets and Meteors;* their nature and motions. *The Stars;* designation, classification by constellations, motions, distance, brightness, variables. *Stellar Systems;* clusters, nebulae; the stellar universe, cosmogony.

As no examination in Astronomy is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 41, 42.

## ADMISSION TO ADVANCED STANDING

A candidate for admission to advanced standing, who comes from an approved institution of collegiate rank, may receive credit, without examination, for work done at such institution. He will be required, however, to present, or to

have had accepted elsewhere, the same entrance subjects as are demanded of students entering Brown University without advanced credit; and to cover, or to have covered, all the prescribed subjects in the course leading to the desired degree at Brown University. The committee on Registration and Attendance will determine the amount of credit that he may receive, on receipt of the following papers, all of which should be sent to the Registrar of Brown University: (1) A formal statement, made out and signed by the proper official of the institution previously attended, showing all preparatory subjects accepted by it for entrance, and all the courses attended at college, with their catalogue numbers, and the standing attained therein by the student; (2) a similar official statement as to whether the student has completed the amount of work regularly required up to the time of his withdrawal from the previous institution, or has done work in excess thereof, or of less amount, or has incurred conditions or probation; (3) a marked catalogue of the institution previously attended, describing the subjects taken; (4) a letter of honorable dismissal from the institution last attended. In case the student desires to present subjects for entrance in addition to those required or accepted at the previous institution, they will be accepted without examination by Brown University provided that they are certified by an approved preparatory school.

A candidate for admission to the Freshman class who offers subjects in excess of those required for admission may be examined in them at the times regularly scheduled for entrance examinations and receive credit for them as college studies.

## ADMISSION OF SPECIAL STUDENTS

Mature persons of good character who desire to pursue some special subjects and who have had the requisite preliminary training are allowed to enter the various courses of study in the University without becoming candidates for a degree.

Students who come directly from schools offering full preparatory courses for college, and who are unable to meet the requirements for admission to the regular courses either by examination or certification, will not be admitted as special students.

Applicants for registration as special students must present to the Registrar, on or before August 1 if possible, a certified and detailed statement of the nature and extent of their preparatory work, including testimonials of character and ability. In case a student has attended more than one institution, he must present credentials from each of them. Applicants must satisfy the Committee on Registration and Attendance, by passing the entrance examinations or presenting certificates, that they are qualified to pursue the courses desired.

Special students are subject to the same regulations regarding attendance

and examinations as candidates for degrees; they must take fifteen hours of class-room work a week unless satisfactory reasons for a smaller assignment are presented.

## ADMISSION OF GRADUATE STUDENTS

To be admitted as a candidate for an advanced degree, an applicant must have received the degree of Bachelor of Arts, of Philosophy, of Science,‡ or of Letters from Brown University, or some other college of good standing; or, being a student in Brown University, must have completed with a rank of B the work leading to the degree of Bachelor of Arts, of Philosophy, or of Science, with the exception of such an amount as the Committee on Registration and Attendance will allow him to take in excess of a full year's work (fifteen hours a week). A candidate for the degree of Master of Science must have completed in his undergraduate course at least twenty-eight year-hours of work in mathematics and the sciences.

Persons who have obtained the degree of Bachelor of Arts, of Philosophy, of Science, or of Letters, and who desire to pursue graduate studies without being candidates for an advanced degree, are admitted as special graduate students. Such students are subject to all the regulations of the University regarding graduate students except those which relate to candidacy for degrees.

## REGISTRATION AND ENROLMENT OF UNDERGRADUATES

REGISTRATION. In September all new students, whether candidates for a degree or special students, must report at the Administration Building between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first semester, and fill out registration cards for the whole of the ensuing year. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged. All new students must present at or before the time of registration all credentials necessary for admission as candidates for a degree or as special students.

In May of each year all undergraduates in residence, whether candidates for a degree or special students, must obtain at the Registrar's office registration cards, which must be filled out with a statement of the courses elected for the whole of the ensuing year, and returned not later than June 1. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged.

When semester courses are grouped in one paragraph (*e.g.* Botany 1, 2), the second semester may not be taken without the first, unless specific state-

‡ The degree of Bachelor of Science when given for technical work does not lead to the degree of Master of Arts or Doctor of Philosophy in Brown University.

ment to the contrary is made. In starred courses a final mark will be given at the end of the course, the mark given at the end of the first semester being regarded as temporary. Changes in registration will be allowed only on presentation of sufficient reasons to the Committee on Registration and Attendance. Requests for permission to make changes in September must be presented to the committee between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first semester. Requests for permission to make changes for the second semester must be presented to the committee before the beginning of the examinations of the first semester, unless these requests are the result of failures, in which case they must be presented in writing to the Registrar two days before the opening of the second semester.

ENROLMENT. All students must report at the Registrar's office between 9 a.m. and 5 p.m. on one of the two days preceding the opening of each semester and have their names checked as enrolled. Failure to report will be treated as late enrolment and a fee of three dollars will be charged.

## REGISTRATION AND ENROLMENT OF GRADUATE STUDENTS

On or before the first day of the academic year, every candidate for registration as a graduate student must file an application with the Dean of the Graduate Department naming the departments, not exceeding three, which he wishes to enter. The application must be made on a blank provided by the Dean, and the blank must be signed by the heads of the departments concerned. The candidate, if not a student or graduate of Brown University, must submit to the Dean, with his application, his diploma or other official evidence of having received a first academic degree, together with a marked catalogue or detailed statement showing the academic courses he has pursued.

A student who has been registered as a graduate student is enrolled as a candidate for a degree when his course of study for the degree has been approved by the Dean of the Graduate Department and by the Faculty. Although graduates of other colleges of good standing are entitled to registration as graduate students, they are not enrolled as candidates for degrees unless the course of study previously pursued by them is, in the opinion of the Dean of the Graduate Department, acting in consultation with the Committee on Registration and Attendance, substantially equivalent to the course leading to the corresponding degree in Brown University. Graduates of colleges in which the course of study is not, in the opinion of this joint committee, equivalent to the corresponding course at Brown University, will be registered as graduate students, but if enrolled they will be required to make up their deficiency under the direction of the committee.

Candidates for advanced degrees must have their selection of courses approved by the heads of the departments in which they are working, and a statement of these courses must be submitted by the heads of the departments to the Dean of the Graduate Department on or before October 15. In the case of candidates for the degree of Doctor of Philosophy, the statement submitted in the first year of candidacy may be a preliminary outline of the course, but a final statement must be submitted by the head of the department in which the major subject lies not later than October 15 in the last year of candidacy. No change can be made without the consent of the Dean of the Graduate Department and of the head of the department which offers the course.

# REQUIREMENTS FOR DEGREES

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

### I. PRESCRIBED SUBJECTS

*Ancient Languages* (either Latin or Greek, or both). Six hours. At least three hours must be taken in the Freshman year, and the six hours must be completed by the end of the Sophomore year.

*Modern Languages* (either French or German, or both). Six hours. Either in French or in German the equivalent of the elementary and intermediate requirement for admission must be taken, or such portion of this requirement as was not presented for admission, and one three-hour year course in addition in the same language. At least three hours must be taken in the Freshman year.

*Mathematics.* Three hours. Freshman year.

*English* (*Rhetoric and Composition*). Three hours. First semester, Freshman year. Three hours. Second semester, Sophomore year.

*English Literature.* Three hours. Second semester, Freshman year. First semester, Sophomore year.

*European History.* Three hours. Sophomore or Junior year.

*Physical or Natural Science.* Some three-hour course continuous through the year. Freshman, Sophomore, or Junior year.

*Social and Political Science, and Economics.* Some three-hour course continuous through the year. Sophomore, Junior, or Senior year.

*Philosophy.* Some three-hour course continuous through the year. Sophomore, Junior, or Senior year.

### II. REQUIREMENTS ARRANGED BY YEARS

#### FRESHMAN YEAR

I. Required Studies. *Latin* or *Greek*, three hours; *French* or *German*, three hours; *Mathematics*, three hours; *English*, three hours.

II. Elective Studies. One three-hour course continuous through the year must be chosen from the following list: *Latin*, *Greek*, *French*, *German*, *Chemistry*, *Botany*, *Biology*, *Geology*, *Mechanical Drawing*.

#### SOPHOMORE YEAR

That portion of the required work in ancient and modern languages not com-

pleted in the Freshman year, and other required and elective courses sufficient to make a total of fifteen hours a week.

### JUNIOR YEAR

The required History and Physical or Natural Science, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

### SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY‡

### For Students who entered before 1911

### I. PRESCRIBED SUBJECTS

*Modern Languages.* An amount sufficient, with the work presented for admission, to complete the elementary course and a year of advanced work in both French and German. A student who is admitted in both advanced French and advanced German must continue one of these languages for one year, three hours a week.

*Mathematics.* Three hours. Freshman year.

*English* (*Rhetoric and Composition*). Three hours. Freshman year.

*European History.* Three hours. Sophomore or Junior year.

*Physical* or *Natural Science.* Some three-hour course continuous through the year. Freshman, Sophomore, or Junior year.

*Philosophy.* Some three-hour course continuous through the year. Sophomore, Junior, or Senior year.

### II. REQUIREMENTS ARRANGED BY YEARS

#### SOPHOMORE YEAR

That portion of the required work in modern languages not completed in the Freshman year, and other required and elective courses sufficient to make a total of fifteen hours a week.

‡ Candidates for the degree of Bachelor of Philosophy who entered before 1911 may take advantage of the new Requirements for Concentration, may substitute the new for the old requirements in Modern Languages, and, with the consent of the departments concerned, may substitute a course in Argumentation for the required Mathematics. See pages 67-70.

### JUNIOR YEAR

The required History and Physical or Natural Science, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

### SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY

### For Students entering after 1910

### I. PRESCRIBED SUBJECTS

A continuous course of three hours through the year in each of the following subjects:

*Mathematics.* This subject may be omitted by students who intend to take Argumentation in the Sophomore year. Freshman year.

*English* (*Rhetoric and Composition*). First semester, Freshman year. Second semester, Sophmore year.

*English Literature.* Second semester, Freshman year. First semester, Sophomore year.

*French* or *German.* Either in French or in German the equivalent of the elementary and intermediate requirement for admission must be taken, or such portion of this requirement as was not presented for admission, and one three-hour year course in addition in the same language. At least three hours must be taken in the Freshman year.

*Biology.* Freshman or Sophomore year.

*Physics*, *Chemistry*, *Geology*, or *Astronomy.* This requirement does not apply to students who presented Physics and Chemistry for admission. *Chemistry*, or *Geology*, or *Physics*, Freshman or Sophomore year. *Astronomy*, Sophomore year. Only one of this group required.

*Classical Civilization.* Freshman or Sophomore year. Freshman year for students who do not take Mathematics.

*European History.* Freshman, Sophomore, or Junior year.

*Philosophy.* Sophomore, Junior, or Senior year.

*Social and Political Science, and Economics.* Sophomore, Junior, or Senior year.

*Argumentation* (for students who did not take Mathematics). Sophomore year.

## II. REQUIREMENTS ARRANGED BY YEARS

### FRESHMAN YEAR

I. Required Studies. *English*, *French*, or *German* (a course in continuation of a course presented for admission); *Mathematics* (for students who do not intend to take Argumentation in the Sophomore year); *Classical Civilization* (for students who do not take Mathematics); *Biology*, *Chemistry*, *Geology*, or *Physics*.

II. Elective Studies. One three-hour course continuous through the year must be chosen from the following list: *Latin*, *Greek*, *French*, *German*, *Classical Civilization*, *History*, *Chemistry*, *Botany*, *Biology*, *Geology*, *Mechanical Drawing*.

### SOPHOMORE YEAR

That portion of the required work in modern languages not completed in the Freshman year.

*Biology;* for students who did not take this course in the Freshman year.

*Physics*, *Chemistry*, *Astronomy*, or *Geology;* for students who did not present Physics and Chemistry for admission or take a course in Physical Science in the Freshman year.

*Argumentation;* for students who did not take Mathematics in the Freshman year.

*Classical Civilization;* for students who did not take this subject in the Freshman year.

*English.*

Other required and elective courses sufficient to make a total of fifteen hours a week.

### JUNIOR YEAR

The required History, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

During the Junior and Senior years a student must take at least four courses outside the department chosen for special work. See Requirements for Concentration, below.

### SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

## III. REQUIREMENTS FOR CONCENTRATION

At the close of the Sophomore year each candidate for the degree of Bachelor of Philosophy must choose from the following list a department in which he intends to do special work during the Junior and Senior years, and must elect

at least three courses of three hours a year each in this department. If he has not already taken a three-hour year course in the department chosen, he must elect four courses.

These courses must be selected in consultation with the head of the department and must be approved by him. When two departments are combined, the selection must be made in consultation with the head of the department first named.

At any time before the beginning of the Senior year a student may, with the approval of the Committee on Registration and Attendance, change the department in which he is to do his special work.

With the approval of the department in which the student is doing special work, he may count as the equivalent of one course, work which does not require regular class-room attendance.

## LIST OF DEPARTMENTS IN WHICH SPECIAL WORK MAY BE TAKEN

Art.
Art, and Greek Literature and History.
Art, and Roman Literature and History.
Art, and Music.
Art, and History.
Astronomy.
Astronomy, and Civil Engineering.
Astronomy, and Physics.
Astronomy, and Mathematics.
Astronomy, and Geology.
Biblical Literature and History.
Biblical Literature and History, and Greek Literature and History.
Biblical Literature and History, and Philosophy.
Biology.
Botany.
Botany, and Biology.
Chemistry.
Civil Engineering.
Economics.
Education.
Education, and Philosophy.
Education, and Social and Political Science.
Education, and History.
Electrical Engineering.
English.
Geology.
Germanic Languages and Literatures.

Greek Literature and History.
Greek Literature and History, and Roman Literature and History.
Greek Literature and History, and Biblical Literature and History.
Greek Literature and History, and Indo-European Philology.
Greek Literature and History, and Art.
History.
Mathematics.
Mechanical Engineering.
Mechanics and Mechanical Drawing.
Mechanics, and any Engineering department.
Philosophy.
Physics (exclusive of Electrical Engineering).
Roman Literature and History.
Roman Literature and History, and Art.
Roman Literature and History, and Greek Literature and History.
Roman Literature and History, and Indo-European Philology.
Romance Languages and Literatures.
Social and Political Science.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING

### FRESHMAN YEAR

| *First Semester* | *Second Semester* |
|---|---|
| Mathematics 17 | Mathematics 18 |
| Mech. Drawing 1 | Mech. Drawing 2 |
| English 1 | English 2 |

and two of the following courses, Chemistry (if not presented for admission), French, German, subject to the direction of the Committee on Registration and Attendance.

Note. A student who presents three units in one foreign language for admission is not required to take a course in that language in college, but may elect any course he desires, subject to the approval of the head of the Department of Civil Engineering.

### SOPHOMORE YEAR

| | |
|---|---|
| Mathematics 19 | Mathematics 20 |
| Mech. Drawing 3 | Mech. Drawing 4 |
| Civil Engineering 1 | Civil Engineering 2 |
| Physics 1 | Physics 2 |

| *First Semester* | *Second Semester* |
|---|---|
| ‡Economics 1 | ‡Soc. and Pol. Science 1 |
| | § Civil Engineering 4 |
| | Civil Engineering 6 |

JUNIOR YEAR

| | |
|---|---|
| Civil Engineering 7 | Civil Engineering 8 |
| Mechanics 1 | Mechanics 2 |
| Geology 3 | Geology 4 |
| Physics 21 | Physics 22 |
| Mech. Engineering 19 | Mech. Engineering 20 |
| Astronomy 5 | Civil Engineering 10 |
| | Civil Engineering 12 |

SENIOR YEAR

| | |
|---|---|
| Civil Engineering 9 | Civil Engineering 20 |
| Civil Engineering 13 | Civil Engineering 22 |
| Civil Engineering 15 | Civil Engineering 24 |
| Civil Engineering 17 | Civil Engineering 26 |
| Civil Engineering 19 | Civil Engineering 28 |
| Civil Engineering 35 | Civil Engineering 30 |
| Elect. Engineering 1 | Civil Engineering 32 |
| | Civil Engineering 34 |
| | Civil Engineering 36 |
| | Mech. Engineering 24 |
| Mechanics 3 | Mechanics 4 |

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

FRESHMAN YEAR

| *First Semester* | *Second Semester* |
|---|---|
| Mathematics 17 | Mathematics 18 |
| Mech. Drawing 1 | Mech. Drawing 2 |
| English 1 | English 2 |

and two of the following courses, Chemistry (if not presented for admission), French, German, subject to the direction of the Committee on Registration and Attendance.

NOTE. A student who presents three units in one foreign language for admission

‡ Or some other year course in the Department of English, or History, or Philosophy, chosen with the approval of the head of the Department of Civil Engineering.
§ Civil Engineering 4 is taken during the spring recess.

is not required to take a course in that language in college, but may elect any course he desires, subject to the approval of the head of the Department of Electrical Engineering.

### SOPHOMORE YEAR

| *First Semester* | *Second Semester* |
|---|---|
| Mathematics 19 | Mathematics 20 |
| Mech. Drawing 3 | Mech. Drawing 4 |
| Mech. Drawing 5 | Mech. Engineering 8 |
| Physics 1 | Physics 2 |
| ‡ Economics 1 | ‡ Soc. and Pol. Science 1 |
| Mech. Engineering 1 | Mech. Engineering 2 |

### JUNIOR YEAR

| | |
|---|---|
| Mechanics 1 | Mechanics 2 |
| Mech. Engineering 9 | Mech. Engineering 10 |
| Physics 21 | Physics 22 |
| Elect. Engineering 1 | Elect. Engineering 2 |
| Mech. Engineering 3 | Elect. Engineering 6 |
| Mech. Engineering 19 | Mech. Engineering 20 |

### SENIOR YEAR

| | |
|---|---|
| Mechanics 3 | Mechanics 4 |
| Mathematics 9a | Elect. Engineering 12 |
| | Elect. Engineering 10 |
| Physics 23 | Physics 14 |
| Elect. Engineering 3 | Elect. Engineering 14 |
| Elect. Engineering 7 | Elect. Engineering 18 |
| Mech. Engineering 15 | Mech. Engineering 16 |
| | Civil Engineering 26 |
| Elect. Engineering 13 | Elect. Engineering 14 |
| | Mech. Engineering 24 |

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

### FRESHMAN YEAR

| *First Semester* | *Second Semester* |
|---|---|
| Mathematics 17 | Mathematics 18 |
| Mech. Drawing 1 | Mech. Drawing 2 |
| English 1 | English 2 |

and two of the following courses, Chemistry (if not presented for admission),

‡ Or some other year course, not technical, chosen with the approval of the head of the Department of Electrical Engineering.

French, German, subject to the direction of the Committee on Registration and Attendance.

NOTE. A student who presents three units in one foreign language for admission is not required to take a course in that language in college, but may elect any course he desires, subject to the approval of the head of the Department of Mechanical Engineering.

## SOPHOMORE YEAR

| *First Semester* | *Second Semester* |
|---|---|
| Mathematics 19 | Mathematics 20 |
| Mech. Drawing 3 | Mech. Drawing 4 |
| Mech. Drawing 5 | Mech. Engineering 8 |
| Physics 1 | Physics 2 |
| ‡ Economics 1 | ‡ Soc. and Pol. Science 1 |
| Mech. Engineering 1 | Mech. Engineering 2 |

## JUNIOR YEAR

| | |
|---|---|
| Mech. Engineering 19 | Mech. Engineering 20 |
| Mech. Engineering 15 | Mech. Engineering 16 |
| Mech. Engineering 3 | Mech. Engineering 4 |
| Mech. Engineering 9 | Mech. Engineering 10 |
| Mechanics 1 | Mechanics 2 |
| Physics 21 | Physics 22 |

## SENIOR YEAR

| | |
|---|---|
| Mech. Engineering 21 | Mech. Engineering 22 |
| Mech. Engineering 5 | Mech. Engineering 14 |
| Mech. Engineering 17 | Mech. Engineering 18 |
| Mechanics 3 | Mechanics 4 |
| Elect. Engineering 1 | Elect. Engineering 2 |
| Mech. Engineering 11 | Mech. Engineering 12 |
| | Mech. Engineering 24 |
| Mech. Engineering 25 | Mech. Engineering 26 |
| | Civil Engineering 26 |

‡ Or some other year course in the Department of English, or History, or Philosophy, chosen with the approval of the head of the Department of Mechanical Engineering.

## REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

To obtain the degree of Master of Arts, the candidate must complete a course of liberal graduate study of not less than fifteen hours a week for one year. When graduate students pursue courses primarily designed for undergraduates, a higher degree of scholarship than in the case of undergraduates will be required.

Graduates of Brown University who have to their credit work done as undergraduates and not counted towards the bachelor's degree may offer such work in partial fulfilment of the requirements for the degree of Master of Arts, provided such work is in courses which may be taken by graduates and does not lie in more than three departments, and provided the student has completed the work with a grade of B.

Work done in residence for an advanced degree at another institution, and not to be used in fulfilment of the requirements for an advanced degree elsewhere, may, with the approval of the Dean of the Graduate Department, be offered in partial fulfilment of the requirements for the degree of Master of Arts; but the equivalent of at least nine hours' work a week for one year must be done at Brown University.

When any part of the work leading to the degree of Master of Arts is done *in absentia*,‡ the degree will not be conferred until the end of the second full year of study. The degree *in absentia* must be taken within three years after enrolment, unless the period is extended by special action of the Faculty. Candidacy *in absentia* may be terminated at the end of six months if definite evidence of progress has not been submitted. Candidates *in absentia* must register (by correspondence, if necessary) at the beginning of each college year, and make reports to their instructors at the end of each semester. A final public examination is required of all candidates *in absentia*. This examination will be held only when notification of the intention to appear for examination is given on or before April 1 of the year in which the candidate desires to receive the degree.

## REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

To obtain the degree of Master of Science, the candidate must complete a course of scientific study satisfactory to the Dean of the Graduate Department and the departments concerned, of not less than fifteen hours of work a week for one year, and must present a thesis in one of the graduate courses which he is pursuing; in place of the thesis a six-hour graduate laboratory course extending through the year may be accepted. All the work must be in one or more of the following subjects: mathematics, engineering, physics,

‡ Courses *in absentia* are not offered by all departments.

chemistry, astronomy, the biological sciences, psychology, geology, and mineralogy. At least half the work must be in courses designed wholly or primarily for graduates; the remainder may consist of any courses satisfactory to the departments concerned and to the Dean of the Graduate Department.

All the work must be done in residence at Brown University with the exception that work done for the degree of Master of Science at another institution, and not to be used in fulfilment of the requirements for any degree elsewhere, may, with the approval of the Dean of the Graduate Department and the departments concerned, be accepted in partial fulfilment of the requirements for the degree of Master of Science to the extent of not more than six hours of work a week for one year.

## REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY‡

To obtain the degree of Doctor of Philosophy, the candidate must spend at least two years continuously in residence, pursuing a systematic course of advanced study approved by the Graduate Department, the Faculty, and the Board of Fellows, and must pass satisfactory examinations thereon. The candidate must conclude his course with a thesis embodying the results of original research giving evidence of high scholarship and of special attainments in the studies pursued, and constituting as a whole a definite contribution to knowledge. The candidate is examined publicly before June 1 by a committee consisting in each case of the Graduate Department, together with those members of the Faculty who have directed his work and any other officers of professorial rank in the departments concerned. The examination is held only when notification of the intention to appear for examination is given on or before April 1 of the year in which the candidate desires to obtain his degree. The thesis must be presented to the Faculty, in typewritten copy or print, before May 1 in that year. The approval of this thesis by the Faculty is essential to the attainment of the degree.

Work done in residence for the degree of Doctor of Philosophy at another institution, and not to be used in fulfilment of the requirements for an advanced degree elsewhere, may, with the approval of the Dean of the Graduate Department, be offered in partial fulfilment of the requirements for the degree of Doctor of Philosophy. One full year of continuous work, consisting of at least one-half of the minimum requirements for the major and one-half of the minimum requirements for the minor, must be spent at Brown University.

For the degree of Doctor of Philosophy at least two subjects are necessary, a major and a minor, not in the same department; the major subject must

‡ As a rule the requirements for this degree, including the thesis, cannot be satisfied in less than three years.

constitute not less than three-fifths of the candidate's work. The selection of the courses constituting the major and the minor subjects must receive the approval of the head of the department in which the major subject lies, and of the Dean of the Graduate Department. The approval of the head of the department in which the minor subject lies is also necessary for the courses elected in his department.

The candidate must possess a reading knowledge of Latin, German, and French adequate for the purposes of his special studies, unless for sufficient reasons he is excused in respect to one of these languages. To test the candidate's proficiency in this particular, he is examined before December 1 in the last year of his candidacy by a committee consisting of the heads of the departments in which the major and the minor subjects lie, and the heads of the departments of Latin, German, and French.

A year of work for the degree of Master of Arts may be, but is not necessarily, counted as a year of work for the degree of Doctor of Philosophy.

## REGULATIONS UNDER WHICH A STUDENT MAY TAKE A FIRST DEGREE IN LESS THAN FOUR YEARS

A candidate for a first degree, who has credit for the required number of hours of work, including all the required subjects, may, at the end of the semester in which his work is completed, be excused from further attendance at the University, and may receive his degree at the Commencement next following such semester.

A candidate for a first degree who has maintained a satisfactory standing in his studies may, subject to the consent of the Committee on Registration and Attendance, take work in addition to the regular number of hours prescribed in the curriculum of the course which he is pursuing.

A candidate for a first degree may receive credit for work done at the summer school of an approved institution of collegiate rank, provided that the work have the approval of the head of the corresponding department in Brown University. The amount of credit given at the institution in question will be given at Brown University, but the total credit for work at summer schools in any one summer shall not exceed nine semester hours.

A candidate for a first degree may, with the consent of the head of a department and with the approval of the Faculty, pursue studies connected with that department during any summer in which he does not attend a summer school, and may receive credit for such studies, provided that the work be under the supervision of the head of the department concerned and that the candidate pass an examination in all the work before the end of the following semester. The amount of credit will be determined by the head of the department, but the total credit for any one summer shall not exceed six semester

hours. No student will be allowed to do summer work in connection with any department of the University until he has presented to the head of the department a registration slip signed by the Registrar.

A student who at the beginning of his Senior year lacks less than thirty semester hours of completing his course may, with the consent of the Committee on Registration and Attendance, distribute his work over the year.

A student who at the beginning of any semester lacks less than fifteen semester hours of completing his course may, for reasons deemed sufficient by the Committee on Registration and Attendance, be excused from taking more than the necessary number of hours.

For conditions under which graduate work may be pursued during the Senior year, see page 62, under "Admission of Graduate Students."

# ATTENDANCE, STANDING, AND EXAMINATIONS

ATTENDANCE. Every student is required to attend every session of the classes in which he is registered, including gymnasium, and also the daily Chapel service.

STANDING. A record is kept of the attendance of every student and of his proficiency in his several studies. At the close of each semester a report is sent to the parent or guardian of every undergraduate student containing a record of all his absences from required exercises, and indicating his standing in each of his studies for the semester and his deficiency in any study or studies, if any deficiency exists. A student who has failed in three or more courses in any semester, counting for more than eight hours a week, cannot continue his work without the permission of the Committee on Registration and Attendance.

There are four pass grades: A, B, C, D. No student will be allowed to graduate who has not attained a grade above D in at least sixty semester hours of college work.

E is assigned to those who have failed to pass, but who, in the opinion of the instructor, should be allowed a second examination.

F is assigned to those whose work during the semester has been so unsatisfactory that, in the opinion of the instructor, they should not be allowed an examination, or to those whose work in the regular examination has been so unsatisfactory that, in the opinion of the instructor, they should not be allowed a second examination, or to those who, in a laboratory course, have not completed half the work required.

I is assigned to those whose work is incomplete, but satisfactory so far as done. All incomplete work must be made up before the middle of the following semester unless special permission for extension of time is given by the Committee on Registration and Attendance. If this requirement is not met, the mark will be changed to F.

Abs. is assigned to those who were absent from examination, unless F has already been assigned.

O is assigned to those who have been absent one-half the time in a course, or to those whose absence from the examination is not excused by the Committee on Registration and Attendance.

EXAMINATIONS. All classes are examined at the close of each semester. Unless special arrangement is made with the approval of the Committee on Examinations, a student is not admitted to the examination in a study in which he has received the mark F or O.

Examinations other than the regular semester examinations are given only in

the cases of: (1) students who have received the mark E, (2) students who have received the mark Abs., and (3) candidates for advanced standing.

A student is not admitted to a special examination except on written authorization from the Registrar. If the examination is taken to remove the mark E or Abs., the student must pay to the Registrar a fee of two dollars. The Registrar does not authorize special examinations for advanced standing or to remove the mark Abs. without the consent of the Committee on Registration and Attendance.

Special examinations upon the work of the first semester are given only during the second semester, on the third Saturday and succeeding Wednesdays and Saturdays, or in the following September, on as many days as may be necessary preceding the opening of the academic year. Special examinations upon the work of the second semester are given only on the above-mentioned days in the following September.

Students desiring special examinations in the second semester must make application to the Registrar not later than the first Saturday of the semester, specifying the subjects in which examinations are desired. On or before the second Wednesday a schedule of special examinations will be posted. Students desiring special examinations in September must make application to the Registrar not later than August 15, specifying the subjects in which examinations are desired. A schedule of the September examinations is sent about September 1 to the students concerned. Special examinations on the work of the second semester of the Senior year are arranged at the convenience of the instructor.

Special examinations at times other than those scheduled are allowed only by consent of the Committee on Registration and Attendance.

Special examinations for advanced standing are, so far as possible, arranged at the times assigned for other special examinations.

EXAMINATIONS IN ENTRANCE CONDITIONS. Members of the Freshman class who enter with conditions in English *a*, English *b*, Algebra, or Plane Geometry are required to take regular instruction in these subjects during the Freshman year under a tutor approved by the department concerned. A special examination will be given on completion of the work.

Students who enter with conditions in Language, Science, History, Solid Geometry, or Plane Trigonometry must remove these conditions, by examination, before the beginning of the Sophomore year, otherwise such conditions will be regarded as deficiencies in college work and the students required to take extra courses in the departments in which the deficiencies occur, the amount and selection of the courses to be determined by the Committee on Registration and Attendance in consultation with the departments.

For members of the Freshman class, special entrance examinations are given by the University at the close of the Christmas recess in all subjects except English, Algebra, and Plane Geometry. Students desiring to take these examinations must file written applications with the Registrar before December 1.

No student who has failed in an entrance examination will be granted a second examination at any time other than September, except on presentation of a tutor's certificate that he is prepared for such examination, and on payment of a fee of two dollars. No entrance examinations other than those appointed above will be held unless ordered by vote of the Committee on Registration and Attendance.

# COURSES OF INSTRUCTION

*WHEN semester courses are grouped in one paragraph* (e.g. *Biology 1, 2*), *the second semester may not be taken without the first unless specific statement to the contrary is made. In starred courses a final mark covering the work of the course as a whole is given at the end of the course, the marks given at the end of the first semester being regarded as temporary. When the time of meeting is not announced, it will be arranged by the instructor at the beginning of the semester.*

## I. ART‡

WILLIAM CAREY POLAND, A.M., LITT.D., *Professor of the History of Art*

1, 2. *History of Art from Antiquity through the Renaissance*

First semester, ancient art, chiefly Greek and Roman. Second semester, Early Christian, Byzantine, Romanesque, and Gothic art, and the art of the fifteenth and sixteenth centuries; the effect on art of the dominant motives of the epoch, the development of art in the different countries of Europe, the great masters and their most significant works. Text-book, lectures, lantern views. Students who elect this course are advised to elect also, if possible, courses 17, 18, *Advanced Draving and Color Work.*

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Either semester may be elected independently. *Mon., Wed., Th., at 10.20.*

3, 4. *Modern Art, and Theory and Criticism of the Fine Arts*

First semester, the seventeenth and eighteenth centuries. Second semester, the nineteenth century, with a study of the more important facts and laws of artistic production. Text-book, lectures, special assigned topics, lantern views.

Three hours. Through the year. Course 3 is elective for students who have completed 2. Course 4 is elective for students who have completed 1, or 2, or 3. *Tu., Th., Sat., at 12.20.*

[5,* 6.* *Renaissance Art, Advanced Course*]

Critical study of the art of the fifteenth and sixteenth centuries, particularly Italian. A more detailed study of the spiritual conditions, the influences, and the masters, than in 2.

‡ For arrangements with the Rhode Island School of Design, see page 166.

Three hours. Through the year. Elective for students who have credit for 2. Not offered in 1912–13.

[7, 8. *Seminary in Greek and Roman Sculpture*]

An archaeological course based on Overbeck's *Schriftquellen.*

Three hours. Through the year. Elective for Graduates who read Greek and Latin. Not offered in 1912–13.

9. *Seminary Study of the Acropolis of Athens*

Critical reading, in Greek, of Pausanias' account of the Acropolis of Athens; lectures and illustrations.

Three hours. First semester. Elective for Graduates who read Greek and Latin. It is advised that application be made to Professor Poland at an early date.

10. *Seminary in Classical Architecture*

Critical study; reading of Vitruvius in Latin; discussion of the principles followed by the Greek and Roman architects, and of the influence of Vitruvius upon the Renaissance.

Three hours. Second semester. Elective for Graduates. Offered if three or more elect the course. It is advised that application be made to Professor Poland at an early date.

15,* 16.* *Freehand Drawing*

Training of hand and eye by study in charcoal and pencil of casts and still-life objects.

One hour. Two hours of drawing. Through the year. Elective for Undergraduates. Given at the Rhode Island School of Design. Hours to be arranged with the Director.

17,* 18.* *Advanced Drawing and Color Work*

Practical work in light and shade, and in color.

Three hours. Six hours of drawing, or four hours of drawing and one hour lecture on Historic Ornament. Through the year. Elective for students who have credit for or are taking 1, 2, and who have credit for 15, 16. Given at the Rhode Island School of Design. *Mon., Tu., Wed., at 2.* Lecture hour to be arranged with the Director.

19,* 20.* *Architectural Design*

Principles of architectural design and composition taught by means of lectures, problems in design, and working drawings.

Three hours. One hour of recitation and four hours of drawing. Through the

year. Elective for students who have credit for Mechanical Drawing 3, 4. Given at the Rhode Island School of Design by Mr. Norman M. Isham. *Mon. at 3.* Drawing hours to be arranged with the Director.

## II. ASTRONOMY

Winslow Upton, A.M., Sc.D., *Professor of Astronomy*
John Edwards, *Assistant in the Ladd Observatory*

### 1, 2. *General Course*

Designed for general culture and preparation for technical work. Fundamental conceptions; methods of professional study. First semester, chief topic: the movements of the heavenly bodies. Second semester, chief topics: the physical condition of the heavenly bodies; the sidereal universe.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors who have credit for Mathematics 1, 2. *Tu., Th., Fri., at 3.20.* Observations at Ladd Observatory.

### 5. *Field Astronomy*

The astronomical problems of geodesy: azimuth, time, latitude, longitude. Computations and observations.

Four hours. First semester. Required of candidates for the degree of Bachelor of Science in Civil Engineering. Elective for Juniors and Seniors who have credit for Mathematics 1, 2. *Mon., Tu., Th., Fri., at 2.20.* Observations at Ladd Observatory.

### 7, 8. *Advanced Astronomy*

Designed for students who wish to specialize in Astronomy.

Three hours. Through the year. Elective for approved students who have credit for 1, 2. Not given unless elected by four or more students.

### 9, 10. *Research Course*

Special advanced work. Subjects arranged to meet the requirements of individual students.

Elective for Graduates and approved Undergraduates.

## III. BIBLICAL LITERATURE AND HISTORY‡

HENRY THATCHER FOWLER,† PH.D., *Professor of Biblical Literature and History*

EARLE BENNETT CROSS, PH.D., *Acting Assistant Professor of Biblical Literature and History*

NATHAN STERN, PH.D., *Lecturer in Biblical Literature and History*

### LANGUAGES

1, 2. *Elementary Hebrew*

Grammar; exercises in writing Hebrew; translation of parts of Genesis and Deuteronomy. *Dr.* STERN.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates.

3, 4. *Historical Hebrew*

Reading of the books of Samuel and Kings with special attention to the acquisition of a vocabulary; review of the elements of Hebrew grammar and study of syntax. *Dr.* STERN.

Three hours. Through the year. Elective for students who have credit for 1.

5, 6. *Hebrew Literature*

Wisdom literature. Critical translation of the Wisdom writings of the Old Testament; investigation of the characteristics and development of Hebrew reflective literature. In succeeding years corresponding courses in the Legal, Prophetic, and Psalm literature of the Old Testament will be offered. *Professor* FOWLER. [This year *Professor* CROSS.]

Three hours. Through the year. Elective for Graduates and approved Undergraduates.

7. *Textual Criticism of the Old Testament*

The principles and method of textual criticism, in connection with the study of one of the shorter prophetical books. *Dr.* STERN.

Three hours. One semester. Offered if applied for by Graduates.

8. *Biblical Aramaic*

Grammar and reading of the Aramaic portions of the Old Testament. *Dr.* STERN.

Three hours. One semester. Offered if applied for by students who have credit for 1.

‡ For conditions under which students may receive credit in the Newton Theological Institution for work done in this department, see page 166.

† On leave of absence during the academic year 1912–13.

[9, 10. *Elementary Arabic*]

Grammar; exercises in writing Arabic; translation of prose selections.

Two hours. Through the year. Elective for Seniors and Graduates. Not offered in 1912–13.

[11, 12. *Gospels and Epistles*]

First semester, the Gospel and Epistles of John, the Gospel of Mark. Second semester, the Gospels of Matthew and Luke.

Not offered in 1912–13.

13, 14. *Acts and Pauline Epistles*

Characteristics of Hellenistic Greek; translation, and investigation of date, authorship, and thought. First semester, Acts and Thessalonians. Second semester, Galatians, Corinthians, and Romans. *Professor* Fowler. [This year *Professor* Cross.]

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Either semester may be elected independently. *Wed., Fri., Sat., at 11.20.*

## LITERATURE AND HISTORY IN ENGLISH ‡

15, 16. *Old Testament Literature and History*

Includes nearly the entire Old Testament literature and history. Emphasis placed upon the connection between the literature and the history. In connection with course 17, 18, gives a comprehensive view of Biblical literature and history. The books are read in the best English translations. First semester, early Semitic history, Hebrew literature and history to the close of the United Kingdom. Second semester, Hebrew and Jewish literature and history from the division of the kingdom to the conquest of Alexander. *Professor* Fowler. [This year *Professor* Cross.]

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Either semester may be elected independently. *Mon., Wed., Th., at 10.20.*

17, 18. *New Testament Literature and History*]

Includes a large part of the Jewish writings from the conquest of

‡ Course 19, 20 gives a rapid survey of the Bible as a part of the world's literature. It is designed especially for those who do not expect to pursue further courses in this Department. Courses 15, 16 and 17, 18 are introductory to more detailed courses in the University or the Theological Seminary. They are also designed for those who, without intending to specialize in this field, desire a comprehensive view of the nature and results of the historical as well as the literary study of the Bible.

Alexander to the destruction of Jerusalem, and the entire New Testament studied in its Jewish setting. In connection with course 15, 16, gives a comprehensive view of Biblical literature and history. The books are read in the best English translations. First semester, Jewish literature and history from the beginning of the Greek period to the destruction of Jerusalem, the Gospels and other sources for the life of Christ. Second semester, outline of the life of Christ, literature and history of the Apostolic age.

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Either semester may be elected independently. Not offered in 1912–13.

[19, 20. *The English Bible as Literature*]

An outline of the literary history of the Old and New Testaments; the literary forms represented in the Bible; the place of the Bible in English literature. Emphasis upon the literature itself and its connection with the present. Lectures and assigned readings from the English Bible. First semester, Old Testament literature from the beginning to the close of the Babylonian exile. Second semester, the completion of the Old Testament, and the New Testament literature.

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Either semester may be elected independently. Not offered in 1912–13.

21,* 22.* *Biblical Seminary*

Subject for 1912–13: The development of Hebrew Social Institutions. A sociological study of Hebrew history with special reference to the family, economic institutions, the state, and religion. *Professor* Fowler. [This year *Professor* Cross.]

Three hours. Through the year. Elective for Graduates and approved Juniors and Seniors who have taken courses in Biblical Literature and History or in Social Science.

23. *Principles of Historical Criticism and Research*

The general principles of historical criticism and the literature of historical theory. *Professor* Fowler. [This year *Professor* Cross.]

One hour. One semester. Elective for Graduates of one year's standing. Required of all candidates for the degree of Doctor of Philosophy in Biblical Literature and History.

## IV. BIOLOGY

ALBERT DAVIS MEAD, PH.D., SC.D., *Professor of Biology*
FREDERIC POOLE GORHAM, A.M., *Associate Professor of Biology*
HERBERT EUGENE WALTER, PH.D., *Assistant Professor of Biology*
PHILIP HENRY MITCHELL, PH.D., *Assistant Professor of Physiology*
JOHN BURNHAM FERGUSON, A.B., M.D., *Demonstrator in Anatomy*

### 1, 2. *General Biology*

The structure of animals and plants; elementary vital phenomena; the functions of organs; the development of organisms; classification. An outline of the more important biological theories, such as evolution, natural selection, variation, mutation and heredity, and the principles upon which modern hygiene and sanitation are based. The course will introduce the student to the use of the microscope, laboratory technic, and to scientific methods of observation and experiment. *Professor* GORHAM.

Three hours. Six hours of attendance. Through the year. Required in Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. Elective for Undergraduates. Lectures, *Mon., Tu., Th., at 3.20.* Laboratory, *1st div., Mon., Tu., Th., at 2.20; 2d div., Tu., Th., Sat., at 12.20.*

### 3, 4. *Comparative Anatomy of Vertebrates*

Intended not only for the general student, but also for those who are particularly interested in zoölogy and for those who expect to study medicine. The structure and significance of the various organs of vertebrates with particular reference to man. Students are permitted to attend clinics and autopsies at the Rhode Island Hospital. Laboratory work and lectures. *Professor* WALTER.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors who have credit for 1, 2. *Mon., Wed., Fri., at 8.*

### 5, 6. *Anatomy of the Nervous System*

A study of the gross and microscopic anatomy of the brain, nerves, and sense organs in man and other vertebrates. Designed particularly for those intending to study medicine or psychology. *Professor* MEAD.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2.

### 7, 8. *Embryology and Histology*

The origin and the development of the individual body; the elementary structure of the adult organs. Practice in micro-technic. Adapted to the requirements of general students and of those intending to study medicine. *Professor* MEAD.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2. *Tu., Th., Sat., at 8.*

### 9, 10. *Advanced Histology and Pathology*

Advanced work in micro-technic and in normal and pathological histology. Adapted to individual requirements. *Professor* MEAD.

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 1, 2, and 7, 8.

### 11, 12. *General Physiology*

General vital processes in plants and animals; the more special phenomena in higher animals, with their application to human physiology. Designed not only as an introduction to further work, but also as a general view of physiology. Lectures and laboratory work. *Professor* MITCHELL.

Three hours. Six hours of attendance. Through the year. Must be preceded by 1, 2, and by Chemistry 1, 2. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Tu., Th., at 3.20.*

### 13, 14. *Chemical Physiology*

The chemistry of proteins, carbohydrates, and fats; the physiology of the digestive system, with the study of secretions and of artificial salivary, gastric, and pancreatic digestions; examination of blood, bile, and urine; the analysis of foods, with special reference to milk. Designed for those who are interested in physiology either from a medical or a general standpoint, and for those who are specializing in chemistry and desire a knowledge of vital chemical processes. *Professor* MITCHELL.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for or are taking Chemistry 7, 8. *Tu., Fri., Sat., at 10.20.*

### 16. *Bacteriology*

A general discussion of bacteria in all their relations, with special attention in the laboratory to the methods of studying bacteria, includ-

ing the isolation, systematic study, and determination of unknown species. Lectures and laboratory work. *Professor* GORHAM.

Three hours. Six hours of attendance. Second semester. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Wed., Th., at 10.20.*

17, 18. *Advanced Bacteriology*

Practical work in the preparation of culture media; methods of sterilization and disinfection; qualitative and quantitative biological examination of water, milk, air, soil, and sewage; study of certain pathogenic organisms, with the determination of their pathogenic properties, and the methods of bacteriological diagnosis of disease. Laboratory work and seminary. *Professor* GORHAM.

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 16.

19. *Invertebrate Zoölogy*

A study of the natural history of invertebrate animals, particularly marine forms, insects, and protozoa. Field work will constitute an important part of the course. *Professors* GORHAM *and* WALTER.

One hour. Two hours of attendance. First semester. Elective for Undergraduates. *Wed. at 2.20.*

20. *Ornithology*

A study of birds regarded as a group of living animals, in relation to their environment. Lectures and early morning field trips for the identification of wild birds during their spring migration. *Professor* WALTER.

One hour. Two hours of attendance. Second semester. Elective for Undergraduates.

[22. *Evolution*]

The history of biology, principles of classification, geographical distribution, heredity, natural selection, variation, Mendelism, and the relationship of man to the lower animals. Designed particularly for those who have not studied biology. Lectures and assigned reading.

Three hours. Second semester. Elective for Juniors and Seniors. *Wed., Fri., Sat., at 11.20.* Not offered in 1912–13.

24. *Physiology*

A general survey of the activities of living organisms with special reference to the human body, including some applications of modern

physiology to healthful living. Lectures and assigned reading. *Professor* MITCHELL.

Three hours. Second semester. Elective for Juniors and Seniors. *Tu., Th., Sat., at 8.*

### 31, 32. *Human Anatomy*

A course in practical dissection. Students are permitted to attend clinics and autopsies at the Rhode Island Hospital. *Dr.* FERGUSON.

Three hours. Through the year. Elective for Graduates.

### 33, 34. *Biological Research*

Research work arranged to meet the requirements of individual students. *Professor* MEAD.

Three to twelve hours. Through the year. Elective for Graduates.

### 35, 36. *Advanced Physiology*

Laboratory work and seminary. *Professor* MITCHELL.

Three to twelve hours. Through the year. Elective for Graduates who have sufficient knowledge of chemistry and physiology.

### 37, 38. *Bacteriological Research*

Research work arranged to meet the requirements of individual students. *Professor* GORHAM.

Three to twelve hours. Through the year. Elective for Graduates who have credit for 16 and 17, 18.

### 39, 40. *Biological Theories and Problems*

Seminary course. *Professor* MEAD.

One to three hours. Through the year. Elective for Graduates.

### 41, 42. *Zoölogical Seminary*

Reading and discussion of German zoölogical literature selected with reference to the needs of individual students. *Professor* WALTER.

One to three hours. Through the year. Elective for Graduates.

## V. BOTANY

HARLAN HARVEY YORK, PH.D., *Assistant Professor of Botany*

### 1, 2. *General Course*

Designed not only as a general culture course, giving the student a

definite conception of the vital importance of botany as related to modern life, but also as a preliminary training for those who contemplate further work in botany. The origin, development, structure, physiology, and classification of plants. A discussion of biological subjects of fundamental human interest, such as evolution, the origin of new species, and the general laws of inheritance in plants.

Three hours. Six hours of attendance. Through the year. Elective for Undergraduates. Lectures, *Mon., Wed., at 8.* Laboratory, *Mon., Tu., 2.20 to 4.20.*

3, 4. *Physiological Anatomy*

Intended for students who are planning to study medicine, agriculture, forestry, or plant pathology, as well as for those who expect to teach or pursue further work in botany. The origin, minute structure, and physiological function of plant tissues; reproduction, cytology, methods in micro-technic. The biological purpose of this course is to help the student to understand how plants, by the differentiation of cells and their association into tissues adapted to perform different kinds of work, are able to meet the conditions of their environment.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or its equivalent.

[5, 6. *Comparative Morphology and Phylogeny*]

Designed not only for the general student, but for those who expect to teach, and for those who are particularly interested in botany. Methods in micro-technic. Intended to acquaint the student with a wider range of scientific methods in plant biology through a more comprehensive knowledge of plant forms and the more fundamental conclusions of morphology and phylogeny. Special emphasis will be placed upon the evolution, morphology, and classification of plants.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or its equivalent. Not offered in 1912–13.

7, 8. *Advanced Course*

Special work on various phases of botany arranged to meet the requirements of individual students. May be taken in successive years. Students electing this course must plan it definitely, in consultation with the instructor, before June 1 of the preceding academic year.

One or more hours. Through the year. Either semester may be elected independently. Elective for Graduates, and for approved Juniors and Seniors.

10. *Trees*

Intended to familiarize the student with the common native and introduced trees of Rhode Island. Special attention will be given to their structure and economic value. Lectures and field work.

One hour. Two hours of attendance. Second semester. Elective for Undergraduates. Lectures, *Fri. at 8.*

11, 12. *Physiology*

Includes a study of imbibition, diffusion, osmosis, turgor, and the retention of bodily form; relation of soil and solutes to the plant; transpiration and exudation; movement of materials within the plant body; photosynthesis; respiration; growth and movement; reproduction and death.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2, and 3, 4, or 5, 6, and for Graduates.

## VI. CHEMISTRY

JOHN HOWARD APPLETON, A.M., Sc.D., *Newport-Rogers Professor of Chemistry*

JOHN EMERY BUCHER, PH.D., *Associate Professor of Organic Chemistry*

NORMAN EDWARD HOLT, Sc.M., *Instructor in Chemistry*

ROBERT GAMBLE CASWELL, Sc.M., *Instructor in Chemistry*

1, 2. *Descriptive Chemistry* ‡

Non-metals; metals, their metallurgy, compounds, and practical applications; theoretical chemistry. Lectures with experiments; written exercises; individual laboratory work. *Professor* BUCHER, *Messrs.* HOLT *and* FOOTE.

Three hours. Through the year. Elective for Undergraduates. *1st div., Mon., Th., at 10.20; 2d div., Tu., Fri., at 10.20.* Laboratory hours to be arranged with the instructor.

‡ Credit for the entrance requirement in Chemistry admits only to 1, 2, which may be taken also without previous preparation. Students who wish to enter more advanced courses without taking 1, 2 must pass a special test at the time of the entrance examination in Chemistry. This test will cover the following topics: 1. All of the non-metals with their principal compounds and the processes of manufacture of the chief commercial products from non-metals. 2. About thirty important metals, their occurrence, preparation from the ore, the preparation and uses of their chief compounds. 3. The general principles of chemical action which depend upon physical laws. 4. Methods of making chemical computations of moderate difficulty. Preparation for this test may require the equivalent of six hours a week for one school year.

3, 4. *Qualitative and Quantitative Analysis*

Properties of the metallic elements; their separation from certain of their compounds. The principal non-metals and the acids formed by them; methods of separation and recognition of acids and acid radicles. Quantitative precipitations and separations of the most important elements and compounds; the principles upon which quantitative apparatus is constructed. Laboratory work; recitations in qualitative analysis and in chemical philosophy; exercises in stoichiometry. *Professor* APPLETON, *Messrs.* CASWELL *and* FOOTE.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2. *1st div., Fri. at 11.20; 2d div., Sat. at 10.20.* Laboratory hours to be arranged with the instructor.

5, 6. *Quantitative Analysis, Advanced Course*

Assaying of metallic ores; analysis of agricultural materials; testing of chemicals used in textile establishments, etc. *Professor* APPLETON *and Mr.* CASWELL.

Six hours. Twelve hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 3, 4. Laboratory hours to be arranged with the instructor.

7, 8. *Organic Chemistry*

Preparation and analysis of representative organic compounds. Lectures, recitations, and laboratory work. *Professor* BUCHER *and Mr.* HOLT.

Six hours. Through the year. Elective for approved Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

10. *Assaying*

*Professor* APPLETON *and Mr.* CASWELL.

Six hours. Twelve hours of attendance. Second semester. Elective for Seniors and Graduates who have credit for 1-4.

12. *Organic Dyes*

The chemistry and use of mordants, dyes, etc. *Professor* APPLETON *and Mr.* CASWELL.

Six hours. Twelve hours of attendance. Second semester. Elective for approved Seniors and Graduates.

13, 14. *Industrial Chemistry*

Lectures and laboratory work. *Professor* APPLETON.

Three to six hours. Six to twelve hours of attendance. Through the year. Elective for approved Graduates. Either semester may be elected independently.

[15, 16. *Physical Chemistry*]

Lectures and laboratory work.

Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates. Not offered in 1912–13.

17, 18. *Physical Chemistry, Advanced Course*

Lectures and laboratory work. *Professor* BUCHER.

Three hours. Through the year. Elective for approved Graduates who have credit for Physics 1-4, and have credit for or are taking Mathematics 7, 8.

19. *Organic Chemistry, Advanced Course*

*Professor* BUCHER.

Three hours. First semester. Elective for approved Graduates.

20. *Inorganic Chemistry, Advanced Course*

*Professor* BUCHER.

Three hours. Second semester. Elective for approved Juniors, Seniors, and Graduates.

21, 22. *Organic Preparations, Advanced Course*

*Professor* BUCHER.

Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates.

23, 24. *Inorganic Preparations, Advanced Course*

*Professor* BUCHER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 7, 8.

25, 26. *Research Work in Chemistry*

*Professor* BUCHER.

Three or more hours. Through the year. Elective for Graduates.

27, 28. *Conference on Special Topics in Chemistry*

*Professor* BUCHER.

One hour. Through the year. Elective for approved students.

29, 30. *Conference on Special Topics in Chemistry*

*Professor* APPLETON.

One hour. Through the year. Elective for approved students.

31, 32. *Industrial Chemistry and Research*

*Professor* APPLETON.

Three or more hours. Through the year. Elective for approved Graduates.

## VII. CIVIL ENGINEERING ‡

JOHN EDWARD HILL, C.E.M., Sc.D., *Professor of Civil Engineering*
HARDY CROSS, Sc.B., C.E.M., *Assistant Professor of Civil Engineering*
ROLAND ELLIS HUTCHINS, Sc.B., *Instructor in Civil Engineering*
JOHN JOSEPH LONG, PH.B., *Instructor in Civil Engineering*

1, 2. *Surveying*

Theory and practice of plane surveying; use of tape, compass, level, and transit; adjustment of instruments; pen topography; contour drawing; conventional signs; plotting. *Professor* HILL, *Messrs.* HUTCHINS *and* LONG.

Five hours and three hours. Through the year. Elective for students who have credit for Mathematics 18 and Mechanical Drawing 2. First semester, *Mon., Tu., Th., at 11.20; Mon., Th., 2 to 5.* Second semester, *Mon. at 11.20; Mon., Th., 2 to 5.*

4. *Surveying, Advanced Field Work*

Use of stadia, plane table, and barometer; precise base-line measurement with steel tape; triangulation; topography. *Professors* HILL *and* CROSS, *Messrs.* HUTCHINS *and* LONG.

One hour. Spring recess. Elective for students who have credit for 1 and are taking 2.

5, 7, 8, 9. *Railroad Engineering*

Theory, location, construction, and economics of railroad engineering. Lectures, recitations, field work, and drafting. Second semester, railroad curves and practical problems. First semester, actual location of a line about two miles long, map, and estimate of cost. Second semester, railroad track and track work; maintenance of way depart-

‡ All courses in this department are required for the degree of Bachelor of Science in Civil Engineering.

ment; economics of location. First semester, earthwork and its cost; rock excavation; tunneling. *Professor* HILL *and Mr.* HUTCHINS.

Two, three (six hours of field work), two, and two hours. Second, first, second, and first semesters. Courses 6 and 7 are elective for students who have credit for 2. Courses 8 and 9 are elective for Juniors and Seniors. Second semester, *Tu., Th., at 11.20.* First semester, *Wed., 9.20 to 5.* Second semester, *Tu., Th., at 9.20.* First semester, *Fri. at 9.20; Mon., 2.20 to 5.20.*

### 10. *Geodesy*

Problems in geodetic surveying, with sufficient theory for a proper understanding of the formulas used. Lectures, recitations, and computations. *Professor* HILL.

Two hours. One hour of recitation and two hours of computations. Second semester. Elective for students who have credit for 4, and Astronomy 5. *Mon. at 9.20; Tu., 2.20 to 4.20.*

### 12. *Highway Engineering*

Economics and location of country roads; surveys, grades, drainage, and foundations; construction and maintenance; economics and design of pavements; dust prevention and preservation of macadam roads; use of bituminous materials in the construction and maintenance of roads; methods of testing road materials; roads and pavements in foreign countries; systems of administration and maintenance; highway laws. Lectures, recitations, inspection trips, and seminary work. *Mr.* HUTCHINS.

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors. *Mon., Tu., Th., at 8.*

### 13. *Hydraulic Engineering*‡

Consideration of water supply mainly from a sanitary standpoint. A general course designed to give the chemical and biological aspects of water supply without laboratory work. Lectures, recitations, and seminary work. *Professor* HILL.

Two hours. First semester. Elective for Juniors and Seniors. *Mon., Th., at 10.20.*

### 15. *Theory of Structures*

Theory of statically determinate structures, as illustrated by the plate girder and bridge and roof trusses. Assumptions necessary in the more common cases of statical indetermination. Elements of the

‡ Courses 13, 30, and 32 cover the general subject of sanitation.

elastic theory of structures and applications. Analytical and graphical methods. The object is to develop accuracy in the application of the principles of mechanics to the practical problems of structural design and to establish a correct idea of the interrelation of theoretical investigations and practical details. Lectures, recitations, computations. *Professor* Cross, *Messrs.* Hutchins *and* Long.

Five hours. First semester. Elective for students who have credit for Mechanics 2. *Tu., Wed., Th., at 8; Tu., Wed., at 9.20.*

19. *Bridge Design*

Complete design and shop details of a through plate girder railway bridge or similar structure, accompanied by lectures and discussions. Individual data are given, business-like methods are required, and a practical attitude towards the work is encouraged. Lectures, computations, drafting. *Professor* Cross, *Messrs.* Hutchins *and* Long.

Three hours. One hour of recitation and four hours of drafting, or six hours of drafting. First semester. Elective for students who have credit for Mechanical Drawing 4, and have credit for or are taking 15. *Tu., 11.20 to 1.20; 2.20 to 6.20.*

20. *Bridge Design*

Theory and practice of truss detailing. General and working drawings are prepared for a pin or riveted truss bridge for highway or railway traffic and for a timber or steel roof truss, the work being adapted to the needs of the class. Erection, shop practice, specifications, and other points not covered in 15 are discussed. Lectures, computations, drafting. *Professor* Cross, *Messrs.* Hutchins *and* Long.

Three hours. One hour of recitation and four hours of drafting, or six hours of drafting. Second semester. Elective for students who have credit for 15 and 9. *Tu., 11.20 to 1.20; 2.20 to 6.20.*

22. *Masonry Design*

Theory of dams, arches, retaining walls, and similar structures. Special attention given to the theory of reinforced concrete. Properties of concrete. Design of a dam, an arch, and of several reinforced concrete structures. Lectures, recitations, computations, drafting. *Professor* Cross, *Messrs.* Hutchins *and* Long.

Five hours. Two hours of recitation and six hours of drafting. Second semester. Elective for students who have credit for 15, and Mechanical Drawing 4. *Mon. at 10.20; Th., 10.20 to 1.20; 2.20 to 6.20.*

24. *Foundations*

Methods employed and results to be expected in foundation work. Special attention given to the more common cases. Lectures and recitations. *Professor* Cross.

One hour. Second semester. Elective for students who have credit for Mechanics 2. *Mon. at 9.20.*

26. *Contracts and Specifications*

Law of contracts. Practical considerations in contracting. Preparation of specifications. Interpretation of contracts. Lectures and recitations. *Professor* Cross.

One hour. Second semester. Required of all candidates for the degree of Bachelor of Science. *Th. at 9.20.*

28. *Engineering Jurisprudence*

The legal and some of the economic problems involved in engineering work. The object is to emphasize the importance of these considerations in the solution of technical problems and to interest the student in further investigation. Lectures and recitations. *Professor* Cross.

One hour. Second semester. Elective for Juniors and Seniors. *Tu. at 9.20.*

30. *Hydraulic Engineering* ‡

Consideration of water supply mainly from an engineering standpoint. Irrigation, pumps and pumping machinery; construction of dams and reservoirs. Lectures, recitations, and seminary work. Supplements Mechanics 3, which gives the theoretical treatment of the subject. *Professor* Hill.

Two hours. Second semester. Elective for students who have credit for Mechanics 3. *Tu., Fri., at 10.20.*

32. *Sanitary Engineering* ‡

Theory of sewerage, treatment and disposal of sewage; stream pollution; house drainage and its appliances; garbage collection and disposal; design of sanitary works. Lectures, recitations, drafting, and seminary work. *Professor* Hill.

Three hours. Second semester. Elective for students who have credit for Mechanics 3. *Wed., Fri., at 9.20; Mon., 2.20 to 5.20.*

‡ Courses 13, 30, and 32 cover the general subject of sanitation.

34. *Hydraulic Surveying* (*applied Hydraulics*)

Methods of surveying applicable to river and harbor work. Methods of measuring and rating the flow of streams. Actual measurement of the discharge of a stream by means of the current meter, weir, and floats. Recitations and field work. *Mr.* HUTCHINS.

One hour. Three hours of recitation or eight hours of field work last third of second semester. Elective for students who have credit for 2 and Mechanics 3. *Mon., Wed., Fri., at 11.20; or Tu., 9.20 to 5.20.*

35, 36. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Civil Engineering. The thesis must embody either a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

## VIII. ECONOMICS ‡

HENRY BRAYTON GARDNER, PH.D., *Professor of Economics*
JAMES MARVIN MOTLEY, PH.D., *Associate Professor of Economics*

1. *Elementary Economics*

Affords an outline and discussion of the fundamental principles of the subject. *Professors* GARDNER *and* MOTLEY.

Three hours. In connection with Social and Political Science 1 constitutes a year course required in Sophomore, Junior, or Senior year of candidates for the degree of Bachelor of Arts, and in Sophomore year of candidates for the degree of Bachelor of Science. Elective for others. Beginning with the class entering in 1911, required in Sophomore, Junior, or Senior year, of candidates for the degree of Bachelor of Philosophy. The combined courses will be given in two divisions. For the first division Economics will precede Social and Political Science; for the second, the order will be reversed. *1st div., first semester, Tu., Fri., Sat., at 10.20; 2d div., second semester, Mon., Wed., Fri., at 12.20.*

5, 6. *Money and Banking*

Principles of money; recent monetary history, particularly of the United States; systems of the leading industrial nations; present problems. Principles of banking; recent banking history, particularly of the United States; systems of the leading industrial nations; pres-

‡ The courses in this department other than 1 are open only to students who have credit for Economics 1, and Social and Political Science 1.

ent problems, with special reference to the problem of the reform of the banking system in the United States. *Professor* GARDNER.

Three hours. Two hours of attendance. Through the year. *Mon. 4 to 6.*

7. *Socialism and Labor Problems*

A brief review of the historically important socialistic schemes; an analysis and criticism of the leading socialistic theories, with special emphasis upon present day proposals; the rise of the trade union and the influence of collective bargaining; labor problems in the United States. *Professor* MOTLEY.

Three hours. First semester. *Mon., Tu., Th., at 11.20.*

10. *Tariff, Reciprocity, and Shipping Subsidies*

The development of the American system of protection and its effect upon domestic industry and international commerce; an analysis and criticism of arguments for protective tariff and for free trade; reciprocity agreements; policies of leading nations with regard to state aid to shipping. *Professor* MOTLEY.

Three hours. Second semester. *Mon., Tu., Th., at 11.20.*

11, 12. *Public Finance and Financial History*

General principles of public finance; revenues and expenditures of leading industrial nations; public enterprises in their financial aspects; principal forms of taxation and their effects; public debts. Special attention will be given to the financial history of the United States from the adoption of the Constitution to the present day. *Professor* GARDNER.

Three hours. Through the year. *Wed., Fri., Sat., at 11.20.*

13. *Statistics*

The principles of statistics as a method of recording and presenting social and economic facts; the possibilities and limitations of the statistical method; the interpretation of statistics; some of the important results of statistical investigation. *Professor* GARDNER.

Three hours. First semester. *Tu., Th., Sat., at 12.20.*

14. *Accounting*

The importance of accounting in economic life and the principles which underlie it; the accounting systems of public bodies and quasi-

public corporations; the interpretation of financial statements. *Professor* GARDNER.

Three hours. Second semester. *Tu., Th., Sat., at 12.20.*

15. *Trade and Transportation*

The organization of international trade and the place of the United States in the commerce of the world; a description of the existing trade relations of the United States, of the conditions which control them, and the probable lines of their development, the organization and development of the internal trade of the United States with special reference to railway transportation and the problems to which it has given rise. *Professor* MOTLEY.

Three hours. First semester. *Mon., Wed., Th., at 10.20.*

16. *Corporations and Corporation Finance*

The corporation as a form of business organization; its formation and promotion; capitalization; forms of securities; the stock market; state and federal control and similar topics. *Professor* MOTLEY.

Three hours. Second semester. *Mon., Wed., Th., at 10.20.*

21, 22. *Investigation of Special Topics*

Intended to afford a training in methods of gathering, handling, and presenting data in the study of economic life and problems. Each student is assigned a separate topic. *Professor* GARDNER.

Three hours. Six hours of attendance. Through the year. Either semester may be elected independently. Students intending to take either of these courses must secure the permission of the head of the department not later than December 1 or June 1 in the semester preceding that in which they desire to take the course. It is expected that as a rule these courses will be taken in connection with lecture courses. Hours to be arranged with the instructor.

23, 24. *Economic Seminary*

Study of important aspects of economic theory, history, and current problems of economic life. The first semester, 1912–13, will be devoted to a study of questions connected with the economic history of the United States. *Professors* GARDNER *and* MOTLEY.

Three hours. Two hours of attendance. Through the year. Elective for Seniors and Graduates who have taken advanced work in Economics. Hours to be arranged with the instructor.

## IX. EDUCATION‡

WALTER BALLOU JACOBS, A.M., *Professor of Education*
STEPHEN SHELDON COLVIN, PH.D., *Professor of Educational Psychology*

### 1. *History of Education*

Education among the early culture peoples; development of education in Greece and Rome; early Christian education; the Renaissance and humanism; the beginnings of modern education; the naturalistic movement, Rousseau; the psychological movement, Pestalozzi, Froebel, Herbart; the scientific movement, Spencer and Huxley; education in the United States; recent sociological tendencies; the movement for industrial education. *Professor* JACOBS.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates, and by permission. *Mon., Wed., Fri., at 12.20.*

### 2. *Principles of Education*

The meaning and aim of education; its function as a social institution; physical education—heredity, growth, and development; intellectual education—its aim, the choice of studies, their organization into a consistent whole; the principles of method in teaching; moral education. Education as limited by environment and as gaining the mastery over environment. *Professor* JACOBS.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates, and by permission. *Mon., Wed., Fri., at 12.20.*

### 3. *Psychology of Education*

A study of the general principles of learning and a discussion of habit formation, and of the various activities of mind involved in the process of education,—sensation and perception, imagination, association and memory, attention and interest, the higher mental processes.

‡ Courses 1 and 2 treat education in its relation to the individual and to the social and political whole; interest in them is therefore not limited to those who intend to teach. At the same time they form an introduction to the more advanced courses in Education. Those who intend to teach are advised to elect these courses during the Junior year.

Courses 1-4 cover the usual requirements for certificates of the First Grade except where practice teaching or experience is demanded. In Rhode Island a certificate is required of all teachers in schools supported in whole or in part by public money. Certificates of the First Grade are granted without examination to those who have completed courses 1-4 and hold a college degree. Due credit is also given for separate courses.

Certificates, authorizing the holders to teach in the evening schools of the state, are issued without examination to students who have completed three years of regular work, including Education 1, 2.

For further explanation of the work of the Department see Arrangements with the State of Rhode Island and the City of Providence for the Training of Teachers, page 167.

The course also discusses the problem of transfer in training; work and play; fatigue; economical methods of learning; tests of mental capabilities. *Professor* COLVIN.

Three hours. First semester. Elective for students who have credit for 1 or 2, or who are taking 1, and for Graduates. *Mon., Tu., Th., at 11.20.*

4. *Practical Introduction to Teaching*

The elements of method and their application in practice teaching; observation of good teaching; management and discipline of classes; administration of education; school buildings, their proper construction, maintenance, and equipment; medical inspection; school law. *Professor* COLVIN.

Three hours. Second semester. Elective for students who have credit for or are taking other courses in Education, and for Graduates. *Mon., Tu., Th., at 11.20.*

5. *Secondary Education;‡ Organization and Function*

The place of the high school and academy in the American system of education; comparison with secondary schools in Germany, France, and England; the administration of secondary education; its relation to the colleges and universities; meaning and value of the various secondary school studies, and their organization into a curriculum; high schools; the social life of the high school and academy; high school extension. *Professor* JACOBS.

Three hours. Two hours of attendance. First semester. Elective for Graduates and experienced teachers, and for approved Seniors. *Wed., 3.20 to 5.20.*

6. *Secondary Education;‡ Methods and Processes*

The principles of method as applied to teaching in secondary schools; the resources at the command of the teacher; the preparation of teachers. The following will receive special attention as typical secondary school studies: English, Modern Languages and Latin; History, Science, and Mathematics; the Manual Arts. *Professor* JACOBS.

Three hours. Two hours of attendance. Second semester. Elective for Graduates and experienced teachers, and for approved Seniors. *Wed., 3.20 to 5.20.*

7, 8. *Problems in Practical Teaching; Secondary Schools*

Practice teaching in the Providence High Schools. Observation, re-

‡ In the courses in Secondary Education, Professor Jacobs will be assisted by the following Lecturers on Method:

CHARLES EDWARD DENNIS, PH.D., *Latin.*
JESSE MADISON GATHANY, A.M., *History.*
HAROLD CHARLES NEWTON, A.M., *English.*
RICHARD OWEN DUMMER, A.M., *Physics and Chemistry.*

ports, and conferences. Designed for those who wish to become instructors in colleges, teachers or principals in secondary schools, or superintendents of schools. *Professor* JACOBS, *assisted by the* Supervising Teachers.

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and are taking 5 and 6; also for approved Seniors. *Fri. at 3.20*, and at other hours to be arranged.

9, 10. *Problems in Practical Teaching; Grammar Grades*

Practice teaching in the Providence Grammar Schools. Observation, reports, and conferences. Designed especially for those who wish to become grade teachers, principals of grammar schools, or superintendents of schools, but also for those who wish to teach in secondary schools. The following studies receive special attention: Arithmetic, Language, History, and Geography. *Professor* COLVIN, *assisted by the* Supervising Teachers.

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and are taking 11, 12; also for approved Seniors. *Mon. at 3.20*, and at other hours to be arranged.

11, 12. *Experimental Education*

A laboratory course in educational psychology. The principal methods which have been used in measuring mental and physical capabilities will be reviewed and discussed. Under guidance the student will work through a number of the most important of these methods in the laboratory. He will also conduct a specific experiment in some phase of experimental education, report on his results from time to time, and finally set these forth in the form of a thesis. *Professor* COLVIN.

Three hours. Through the year. Elective for Graduates and experienced teachers.

13, 14. *Educational Administration*

Problems of educational administration in the State of Rhode Island and in the cities and towns of the state. In the study of these problems the varied experiences and experiments of other states and of European countries will be considered. Out of this study will be developed the principles underlying national and municipal administration of education. *Professor* JACOBS.

Three hours. Through the year. Two hours of attendance. Elective for Graduates, experienced teachers, principals, and superintendents, and for approved Seniors. *Th., 4 to 6.*

15, 16. *Seminary in Education*

Studies in current educational problems. The seminary will be conducted in two parts in successive hours. *Part A.* Reviews of the latest books upon education and related subjects, and studies of special topics assigned for presentation. *Part B.* A more intensive study of certain problems of current interest. For 1912–13 the subjects will be: First semester, Social Phases of Education. Second semester, Recent Educational Theory. As subjects are not repeated, the course may be elected for successive years. *Professor* JACOBS.

Three hours. Through the year. Two hours of attendance. Required of student-teachers. Elective for Graduates and experienced teachers, and for approved Seniors. A or B may be elected independently as a one-hour course. *Sat., 10.20 to 12.20.*

## X. ENGLISH‡

WALTER COCHRANE BRONSON, A.M., LITT.D., *Professor of English Literature*

LINDSAY TODD DAMON,† A.B., *Professor of English Literature and Rhetoric*

ALBERT KNIGHT POTTER, A.M., *Associate Professor of the English Language*

GEORGE WYLLYS BENEDICT, PH.D., *Associate Professor of English*

THOMAS CROSBY, A.M., *Associate Professor of English and Public Speaking*

HENRY BARRETT HUNTINGTON, A.B., *Associate Professor of English*

WILLIAM THOMSON HASTINGS, A.M., *Assistant Professor of English*

STANLEY BATES HARKNESS, A.B., *Instructor in English*

LAURENCE RICH GROSE, A.M., *Instructor in English*

HARRY WORTHINGTON HASTINGS, A.M., *Instructor in English*

JOHN HENRY WILLIAMS, A.B., *Assistant in English*

JOHN TRACY WINTERICH, A.B., *Assistant in English*

1. *Rhetoric and Composition*

Designed primarily to teach clear and correct expression. Training in the fundamentals of prose composition. Lectures, recitations, and

‡ Credit for English 1 is a prerequisite for admission to all other courses in the department except 48.

Courses 1-16 may not be counted in fulfilment of the requirement of a year in English Literature.

† On leave of absence during the academic year 1912–13.

themes. *Professors* BENEDICT *and* HASTINGS, *Messrs.* HARKNESS, GROSE, H. W. HASTINGS, WILLIAMS, *and* WINTERICH.

Three hours. First semester. Required of all Freshmen. *1st, 2d, 3d, and 4th div., Mon., Tu., Th., at 11.20; 5th, 6th, 7th, and 8th div., Mon., Wed., Fri., at 12.20; 9th div., Wed., Fri., Sat., at 11.20; 10th div., Mon., Tu., Th., at 3.20.* Candidates for the degree of Bachelor of Science will register in divisions 5 and 6.

### 2. *Rhetoric and Composition*

A continuation of 1. Designed primarily to give training in the method, structure, and style of the chief forms of prose composition. Lectures, recitations, and themes. *Professors* BENEDICT *and* HASTINGS, *Messrs.* HARKNESS, GROSE, WILLIAMS, *and* WINTERICH.

Three hours. Second semester. Required in the Freshman year of all candidates for the degree of Bachelor of Science, and in the Sophomore year of all candidates for the degree of Bachelor of Arts or Bachelor of Philosophy. Students electing 3, 4 may substitute 3 for 2. *1st, 2d, and 3d div., Mon., Wed., Fri., at 12.20; 4th div., Wed., Fri., Sat., at 11.20.* Freshman candidates for the degree of Bachelor of Science will register in divisions 1 and 2. Students repeating 1 or 2 will register in divisions 3 and 4.

### 48. *English Literature from the Beginning to 1798*

An outline course in the history of English literature, with reading and study of the greater writers. *Professors* BRONSON, BENEDICT, *and* HASTINGS, *Mr.* HARKNESS.

Three hours. Second semester. Required in the Freshman year of all candidates for the degree of Bachelor of Arts or Bachelor of Philosophy. In 1912–13 elective for Sophomores. *1st, 2d, and 3d div., Mon., Tu., Th., at 11.20; 4th and 5th div., Mon., Wed., Fri., at 12.20; 6th div., Wed., Fri., Sat., at 11.20.*

### 3, 4. *English Composition, Second Course*

Intended to supplement the training given in 1, 2, and to develop further the power of exact and lucid statement. Lectures, recitations, and prescribed reading; weekly themes and other written exercises involving a variety of specific tasks such as abstracts, reports, scientific, technical, and historical papers, criticism, and stories. *Professor* HASTINGS.

Three hours. Through the year. Elective for Sophomores and Juniors. Students electing 3, 4 may substitute 3 for 2. *Mon., Wed., Th., at 10.20.*

[5, 6. *English Composition, Advanced Course*]

Intended to develop ease of style and clarity and vigor of thought. Frequent practice in composition and criticism.

Three hours. Through the year. Elective for Juniors and Seniors. With the consent of the instructor the course may be repeated. Not offered in 1912–13.

7, 8. *Argumentative Composition*

Intended to develop the power of handling argumentative topics cogently and persuasively. Lectures on the principles and forms of argumentative composition; frequent practice in brief-drawing and the writing of forensics and less formal arguments. *Professor* HUNTINGTON.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors; required in the Sophomore year of candidates for the degree of Bachelor of Philosophy who did not elect to take mathematics in their Freshman year. *Tu., Fri., Sat., at 10.20.*

9. *Argumentative Composition*

Intended to furnish a more rapid training than 7, 8 for students who wish to begin debate as early as possible or to go quickly over the fundamentals of argumentative composition. The principles and forms of brief-drawing and forensic writing. Lectures, written exercises, briefs, and forensics. *Professor* HUNTINGTON.

Three hours. Two hours of attendance. First semester. Elective for Juniors and Seniors. Not elective for students who have taken 7, 8. *Mon. at 3.20; Fri. at 2.20.* Not to be offered in 1913–14.

10. *Debate*

Intended to train students in correct and vigorous oral presentation of ideas. *Professor* HUNTINGTON, *with the coöperation of the Professors of Economics, Social and Political Science, History, and Public Speaking.*

Three hours. Second semester. Elective for a limited number of Juniors and Seniors who have credit for 9 or 7. With the consent of the instructor the course may be repeated. *Mon., 3.20 to 5.20; Fri., 2.20 to 4.20.*

11, 12. *Public Speaking*

Principles of voice culture; vocal interpretation of literature; extempore speaking. *Professor* CROSBY.

Three hours. Through the year. Elective for Sophomores and Juniors. *Wed., Fri., Sat., at 11.20.*

13, 14. *Public Speaking, Advanced Course*

Practice in reading lyric, narrative, and dramatic literature, in extempore speaking, and in the composition and delivery of the common forms of the occasional address. Special attention to securing right tone-production and to improvement in speech. *Professor* CROSBY.

Three hours. Through the year. Elective for students who have attained the grade of C in 11, 12. *Mon., Wed., Fri., at 12.20.* Not to be offered in 1913–14.

15, 16. *Old English*

Essentials of Anglo-Saxon grammar; prose selections; Beowulf. *Professor* POTTER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Fri., at 4.20.*

17, 18. *Chaucer*

A study of the poems as literature, with sufficient attention to Middle English grammar to enable the student to read intelligently. Selections from Langland and Gower. *Professor* POTTER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Fri., at 3.20.*

[21, 22. *The Drama in England to 1642*]

The drama as a literary type and its history in England to the closing of the theatres.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1912–13.

[23. *The Modern English Drama*]

The history of the English drama from 1660 to the present time. Reading and discussion of the work of the chief playwrights from Wycherley and Congreve to Jones, Pinero, and Shaw.

Three hours. First semester. Elective for Juniors and Seniors who have credit for a year's work in English Literature. Not offered in 1912–13.

[25, 26. *Shakspere*]

Careful study of a few plays with special attention to exact interpretation.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1912–13.

27, 28. *Shakspere*

A brief survey of the drama before Shakspere. Shakspere as playwright and poet. Reading of all the plays; careful study of the great tragedies. Lectures, discussions, and reports on assigned topics. *Professor* POTTER.

Three hours. Through the year. Elective for Juniors and Seniors. *Tu., Fri., Sat., at 10.20.*

[31, 32. *English Literature from 1660 to 1798*]

The Restoration drama; the classical school; development of the essay and the novel; the beginnings of romanticism.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1912–13.

[33, 34. *The English Novel*]

The history of the English novel from 1700 to 1900; reading and discussion of the greater English novelists, including Defoe, Richardson, Fielding, and Smollett in the eighteenth century, and Scott, Jane Austen, Dickens, Thackeray, Charlotte Brontë, George Eliot, Meredith, Hardy, and Stevenson in the nineteenth century.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for Juniors and Seniors. Not offered in 1912–13.

35. *English Literature from 1798 to 1832, Poetry*

The reaction from pseudo-classicism; the influence of the French Revolution; liberalism and individualism in English poetry; contemporary criticism. Wordsworth, Coleridge, Southey, Scott, Byron, Shelley, Keats, Landor. *Professor* BENEDICT.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. First semester. Elective for Sophomores, Juniors, and Seniors. *Mon., Tu., Th., at 11.20.*

36. *English Literature from 1798 to 1832, Prose*

The development of the romantic novel; the rise of the reviews and quarterlies; essays and miscellaneous prose. Scott, Jane Austen, Coleridge, Jeffrey, De Quincey, Lamb, Hazlitt. *Professor* BENEDICT.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Second semester. Elective for Sophomores, Juniors, and Seniors. *Mon., Tu., Th., at 11.20.*

*37. English Literature from 1832 to 1892, Prose*

Modifications of romanticism; realism; the influence of science and democracy; tendencies at the end of the century. Essays, history, miscellaneous prose, the novel. Macaulay, Carlyle, Arnold, Ruskin, Pater, Newman, Huxley, Dickens, Thackeray, the Brontës, George Eliot. *Professor* BRONSON.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. First semester. Elective for Sophomores, Juniors, and Seniors. *Wed., Fri., Sat., at 11.20.*

*38. English Literature from 1832 to 1892, Poetry*

Modifications of romanticism; Pre-Raphaelitism; the influence of science and democracy; tendencies at the end of the century. Tennyson, Browning, Arnold, Clough, Rossetti, Morris, Swinburne. *Professor* BRONSON.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Second semester. Elective for Sophomores, Juniors, and Seniors. *Wed., Fri., Sat., at 11.20.*

[39, 40. *American Literature*]

American literature from the beginning to 1900, in its relation to American life and to English literature. A rapid survey of the literature of the seventeenth and eighteenth centuries; reading and study of the writers of the nineteenth century, with special attention to Irving, Cooper, Bryant, Poe, Longfellow, Emerson, Hawthorne, Whittier, Lowell, Holmes, and Whitman.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1912–13.

[42. *Contemporary English and American Literature*]

A study of the tendencies of modern thought through the literature that reflects it. Reading and discussion of contemporary poets, novelists, and essayists.

Three hours. Second semester. Elective for Juniors and Seniors. Not offered in 1912–13.

*43, 44. Seminary in English Literature*

Subject for 1912–13: Studies in Milton. *Professor* BRONSON.

Three hours. Two hours of attendance. Through the year. Elective for Graduates, and for a limited number of Seniors who have attained the grade of C in two years' work in English Literature.

## XI. GEOLOGY

CHARLES WILSON BROWN, A.M., *Assistant Professor of Geology*
ALBERT CARY HAWKINS, A.M., *Instructor in Geology*
ARTHUR FRANCIS BUDDINGTON, A.B., *Assistant in Geology*

### 1, 2. *General Geology*

A study of the development of the earth, with special reference to the North American Continent, including a discussion of earth origin, of the work of surface and interior agencies in the production of various topographic forms, rock types and their changes, crustal deformation and continent making, together with a survey of ancient life types and the principles of organic evolution they illustrate. First semester, dynamic and structural geology. Second semester, stratigraphy and paleontology.

Three hours. Through the year. Elective for Undergraduates. *Mon., Wed., Th., at 10.20.*

### 3, 4. *General Geology*

A shorter course than 1, 2, with emphasis upon the discussion of problems that may arise in engineering work. Special attention in map and field study to topographic features resulting from the various geologic agencies, and to the study of hand specimens of ores, minerals, and rock types and their uses. May be continued in 8.

Two hours. Four hours of attendance. Through the year. Required in the Junior year of candidates for the degree of Bachelor of Science in Civil Engineering. Not elective. First semester, *Mon. at 10.20; Fri. at 9.20.* Second semester, *Mon., Wed., at 10.20.*

### 5. *Physical Geography*

Study of the origin, development, and recognition of topographic features produced by agencies such as rivers, oceans, glaciers, and vulcanism; discussion of soils, ores, and other natural resources. May be continued in 6 or 8.

Three hours. First semester. Elective for Juniors and Seniors, and for Freshmen and Sophomores who are not taking another course in the department. *Mon., Th., at 10.20.* Conference hour to be arranged with the instructor.

### 6. *Economic Geography and Conservation*

A discussion of the laws of meteorology, and the relation of climate to soil products and to man and his development; the physiographic controls that influence the development of transportation and com-

merce; agriculture, forests, water power, and water supply; the location and proper development of cities; and the geographic distribution and conservation of ore deposits and other natural resources. May be continued in 8, or 11, 12.

Three hours. Second semester. Elective for Undergraduates who have credit for 1 or 5, or who presented Physiography for admission, except Freshmen and Sophomores who are taking another course in the department. *Tu., Wed., Sat., at 9.20.*

[7. *Economic Geology*]

A discussion of the theories concerning the origin of ore deposits; the geologic relations, and the location, distribution, and production of ores.

Three hours. First semester. Elective for Undergraduates who have credit for 1, 3, or 9, 10. Not offered in 1912–13.

8. *Stratigraphy and Structural Geology*

An introductory course in field geology. Study of areal and structural geology in igneous and sedimentary areas from geologic reports. Practice in the construction of geologic maps and work in the field areas.

Three hours. Second semester. One conference hour to be arranged, and five hours' work in the laboratory or field. Elective for Undergraduates who have credit for 1, 3, or 5.

9, 10. *Mineralogy and Petrography*

An introductory course in the macroscopic and microscopic study of minerals, ores, and rocks. First semester, discussion of crystal forms and the laws of crystallography, determination by physical properties and blow-pipe analysis of the more common minerals and ores. Second semester, study of the optical properties of the rock-forming minerals, rocks, and ores, under the polarizing microscope; determination of rock types; discussion of the fundamental principles of the origin and classification of rocks and ores.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., at 11.20.*

11, 12. *Research in Geology and Geography*

Advanced work in the library, laboratory, or field, in the various phases of geology or geography as outlined in the preceding elementary courses. The region in which the University is situated offers in

a small compass both simple and complex problems in field research in structural, petrographic, mineralogic, paleontologic, and stratigraphic geology. Arranged to meet the requirements of individual students.

One to six hours. Through the year. Elective for Graduates and approved Undergraduates. Either semester may be elected independently.

13. *The Stratigraphy and Paleontology of the Narragansett Basin*

Designed to give, by study in the library and field, a detailed knowledge of the conditions of origin, relationships, structure, and fossil content, of the different groups of the carboniferous system represented in the Narragansett Bay region.

Three hours. One hour of attendance. First semester. Elective for Juniors, Seniors, and Graduates who have credit for Geology 1, 2, and 8, or their equivalents. Not to be offered in 1913–14. Alternates with 7.

## XII. GERMANIC LANGUAGES AND LITERATURES‡

Camillo von Klenze,† Ph.D., *Professor of the Germanic Languages and Literatures*

Asa Clinton Crowell, Ph.D., *Associate Professor of the Germanic Languages and Literatures*

Robert McBurney Mitchell, A.B., *Instructor in German*

John Herbert Bachmann, A.M., *Instructor in German*

Albert Edward Rand, A.M., *Instructor in German*

Bernard Keenan, A.M., *Instructor in German*

1, 2. *Elementary Course, First Year*

Reading, grammar, composition, conversation, dictation, sight reading. *Professor* Crowell, *Messrs.* Mitchell, Bachmann, *and* Rand.

Three hours. Through the year. Elective for students who did not present German for admission. *1st div., Tu., Wed., Sat., at 9.20; 2d div., Mon., Th., Fri., at 9.20; 3d div., Tu., Th., Sat., at 12.20; 4th div., Mon., Tu., Th., at 2.20.*

3, 4. *Elementary Course, Second Year*

Reading of fairly difficult modern German stories, lyrics (von Klenze

‡ Students wishing recommendations from the department to teach German must pass a special examination designed to test their ability to write and to understand German, and, to some extent, to use the spoken language.

† On leave of absence during the academic year 1912–13.

or Hatfield), and two dramas illustrating respectively the classical and the modern period, for example, Schiller's *Maria Stuart* and Hebbel's *Agnes Bernauer.* Review of grammar; composition; conversation based upon the texts read. *Professor* CROWELL *and Mr.* RAND.

Three hours. Through the year. Elective for students who have credit for 1, 2. *1st div., Mon., Wed., Th., at 10.20; 2d div., Tu., Wed., Sat., at 9.20.*

### 5, 6. *Intermediate Course*

Reading of fairly difficult modern German stories, lyrics (von Klenze or Hatfield), and one or two dramas of the classical period. Review of grammar; composition; conversation based upon the texts read. *Messrs.* MITCHELL, BACHMANN, *and* RAND.

Three hours. Through the year. Elective for Freshmen who presented elementary German for admission. Not elective for students who have taken German in college. *1st div., Wed., Fri., Sat., at 11.20; 2d div., Tu., Fri., Sat., at 10.20; 3d div., Mon., Wed., Th., at 10.20.*

### 7, 8. *Advanced Course in Standard Authors, Classical and Modern*

One drama of Goethe or Schiller, one drama of Grillparzer, one drama of Hebbel, von Klenze's *Deutsche Gedichte,* a modern novel like Sudermann's *Frau Sorge.* Talks in German on the history of German literature; oral and written reports in German. *Mr.* BACHMANN.

Three hours. Through the year. Elective for students who have credit for 3, 4, or 5, 6, or 9, 10; or who presented advanced German for admission. *1st div., Mon., Tu., Th., at 11.20; 2d div., Tu., Th., Sat., at 8.*

### 9, 10. *Modern Prose*

Aims to train the student in reading, speaking, writing, and understanding modern German. Reading of texts selected from history and science; for example, Freytag, Helmholtz, Nichols's *Modern German Prose,* Paszkowski's *Lesebuch zur Einführung in die Kenntnis Deutschlands und seines geistigen Lebens,* 4th ed., and a text (such as Mosher's *Willkommen in Deutschland*) to introduce the student to the actual language of modern daily life. Talks in German; oral and written reports in German; letter-writing, composition, and conversation. *Messrs.* MITCHELL *and* KEENAN.

Three hours. Through the year. Elective for students who have credit for 3, 4, or 5, 6, or 7, 8; or who presented advanced German for admission. *Tu., Fri., Sat., at 10.20.*

[11, 12. *German Lyrical Poetry*]
Introduces the student to the various aspects of the inner life of the German people as reflected in the lyrical poetry of the last two centuries. Lectures in German; oral and written reports in German.

Three hours. Through the year. Elective for students who have credit for 3, 4, or 7, 8, or 9, 10. Not offered in 1912–13.

13, 14. *The German Short Story*
The development of the short story into an art form. The study of the "Novelle" as represented by Kleist, Ludwig, Heyse, Storm, C. F. Meyer, Keller, and others, with frequent reference to the chief writers of the short story in France, England, and America. Lectures and reports in German and English. *Mr.* BACHMANN.

Three hours. Through the year. Elective for students who have credit for 3, 4, or 7, 8, or 9, 10. *Tu., Wed., Sat., at 9.20.*

[15, 16. *The German Drama of the Nineteenth Century*]
Kleist, Grillparzer, Hebbel, Hauptmann, and Sudermann. A study of the development of the German drama from waning romanticism to realism, with frequent reference to the chief representatives of the modern drama in other countries.

Three hours. Through the year. Elective for students who have credit for 3, 4, or 7, 8, or 9, 10. Not offered in 1912–13.

17, 18. *Lessing and Schiller*
Aims to introduce the student to the dramatic theory and practice of German classicism. Reading of one or two of Lessing's dramatic works and of several of the representative dramas of Schiller, especially *Wallenstein.* Discussions of the dramatic principles of the Greek and the English drama and of their influence upon Lessing and Schiller, with references to the dramatic theories of the nineteenth century. Lectures and reports in German and English. *Professor* CROWELL.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. *Mon., Wed., Fri., at 12.20.*

[21, 22. *Goethe's Faust: Parts* 1 *and* 2]
Interpretation of the text; study of the Faust legend and of other English and German dramas which present the Faust problem. Lectures and reports in German and English.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. Not offered in 1912–13.

[23, 24. *Goethe: A Study of His Life and Works*]

Lectures in German; reports on assigned topics; extensive reading.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. Not offered in 1912–13.

[25, 26. *Outline History of German Literature*]

Aims to acquaint the student with the most important movements in the evolution of German literary life. Lectures in German; reports on assigned topics; extensive reading.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. Not offered in 1912–13.

27, 28. *German Literature in the Nineteenth Century*

A study of the literary life of Germany as an expression of German civilization in the nineteenth century. The literary output—Romantic School, Young Germany, Naturalism, Realism, Neo-Romanticism—will be studied, with frequent references to prominent personalities in other domains of intellectual life, such as David Friedrich Strauss, Mommsen, Nietzsche, Wagner. Lectures in German; reports on assigned topics; extensive reading. *Mr.* MITCHELL.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. *Tu., Th., Sat., at 12.20.*

31. *Gothic*

The Gothic language, with reading of extracts in Streitberg's *Gotisches Elementarbuch* or Braune's *Gotische Grammatik. Professor* CROWELL.

Three hours. First semester. Elective for Graduates and approved Undergraduates. *Mon., Tu., Th., at 8.20.*

32. *Old High German*

Grammar and reading of selections in prose and verse. Some knowledge of Gothic expected. Braune's *Althochdeutsche Grammatik* and Braune's *Althochdeutsches Lesebuch. Professor* CROWELL.

Three hours. Second semester. Elective for Graduates and approved Undergraduates. *Wed., Fri., Sat., at 11.20.*

[33. *Old Norse*]

Holthausen's *Altisländisches Elementarbuch;* Wilken's *Prosaische Edda;* Hildebrand's *Aeltere Edda.*

Three hours. First semester. Elective for Graduates and approved Undergraduates. Students electing Old Norse should also take Germanic Mythology. Not offered in 1912–13.

[34. *Germanic Mythology*]

Primitive Germanic religion, customs, and ideas, in their relations to German literature. Discussions based on E. Mogk's *Germanische Mythologie. Professor* CROWELL.

Three hours. Second semester. Elective for Graduates and approved Undergraduates. Not offered in 1912–13.

[35, 36. *Middle High German*]

The language of the Middle High German period, including an introduction to Germanic philology. Michel's *Mittelhochdeutsches Elementarbuch; Das Nibelungenlied, Minnesangs Frühling, Walter von der Vogelweide.* Lectures in German. Outside reading.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1912–13.

[41, 42. *Seminary in German Literature*]

Aims to give training in modern methods of investigation and criticism. To be conducted in German.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1912–13.

## XIII. GREEK LITERATURE AND HISTORY

JAMES IRVING MANATT,† PH.D., LL.D., *Professor of Greek Literature and History*

FRANCIS GREENLEAF ALLINSON, PH.D., *David Benedict Professor of Classical Philology*

GLANVILLE TERRELL, PH.D., *Acting Professor of Greek*

A, B. *Elementary Course*

Designed to cover as much as possible of the entrance requirements, and thus to enable a student to take 1 in the following year if he completes by private study before the opening of the first semester the requirement in Homer, and before the opening of the second semester the requirement in the *Anabasis. Professor* TERRELL.

†On leave of absence during the academic year 1912-13.

Three hours. Through the year. Elective for students who did not present elementary and advanced Greek for admission. *Mon., Wed., Th., at 10.20.*

1. *Homer and the Greek Anthology*

Six books of the *Odyssey* in the original, with a general survey of the entire poem. Selections from the Elegiac, Iambic, and Lyric Poets. *Professor* TERRELL.

Three hours. First semester. Elective for students who presented elementary and advanced Greek for admission, or who have credit for A, B, and have done the additional work indicated above. *Tu., Th., Sat., at 12.20.*

2. *Plato and Lysias*

Plato: *Apology* and *Crito,* with selections from *Phaedo,* and collateral readings from the *Euthyphron,* Xenophon's *Memorabilia,* and the *Clouds* of Aristophanes. Lysias: *Orations* VII, XXII, XXIII, XXIV, with collateral reading of Xenophon's *Hellenica,* II. *Professor* ALLINSON.

Three hours. Second semester. Elective for students who have credit for 1. *Tu., Th., Sat., at 12.20.*

3. *Lucian and the Dramatic Poets*

Selections from Lucian. Lectures on the Greek drama. The *Oedipus Tyrannus* of Sophocles and collateral reading in the *Prometheus* of Aeschylus. *Professor* ALLINSON.

Three hours. First semester. Elective for Sophomores. *Mon., Wed., Th., at 10.20.*

4. *The Historians*

The eighth book of Herodotus, with collateral reading of the *Persians* of Aeschylus and Plutarch's *Themistocles.* The seventh book of Thucydides, with collateral reading of Plutarch's *Pericles* and *Nicias. Professor* TERRELL.

Three hours. Second semester. Elective for Sophomores. *Mon., Wed., Th., at 10.20.*

[5. *Epic Poetry*]

The *Iliad,* XVIII-XXIV, with a general study of the poem as a whole. Hesiod: selections from the *Theogony* and the *Works and Days.* Selected Homeric Hymns.

Three hours. First semester. Elective for Juniors and Seniors. Hours to be arranged with the instructor. Not offered in 1912–13.

[6. *The Drama*]

Menander. Aeschylus: *Seven against Thebes.* Euripides: *Medea.* Aristophanes: *Frogs.*

Three hours. Second semester. Elective for Juniors and Seniors. Hours to be arranged with the instructor. Not offered in 1912–13.

[7. *Lyric and Pastoral Poetry*]

Pindar: selected Olympian and Pythian Odes. Bacchylides, v, xvii, xviii. Theocritus: twelve *Idylls.*

Three hours. First semester. Elective for Juniors and Seniors. Not offered in 1912–13.

8. *Plato, Aristotle, and Aeschylus*

Plato: selections from the *Republic.* Aristotle: the *Constitution of Athens.* Aeschylus: the *Agamemnon,* with collateral reading of the rest of the *Oresteia. Professor* Allinson.

Three hours. Second semester. (This year first semester.) Elective for Juniors and Seniors. *Tu., Th., at 2.20; Fri. at 8.*

9. *The Attic Orators*

Selected speeches of Isaeus, Aeschines, and Demosthenes. *Professor* Terrell.

Three hours. First semester. (This year second semester.) Elective for Juniors and Seniors. *Tu., Th., at 2.20; Fri. at 8.*

[10. *Lucian and Pausanias*]

Three hours. Second semester. Elective for Juniors and Seniors. Not offered in 1912–13.

12. *Greek Composition*

*Professor* Allinson.

One hour. Second semester. Elective for Sophomores, Juniors, and Seniors.

[13, 14. *Modern Greek*]

Introduction to the language; readings from living Greek authors and Greek newspapers; conversation.

One hour. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1912-13.

15. *Greek Civilization*

The life of the Greeks from Homer to the second century after Christ,

with special study of the political, social, and religious institutions of the classical period as illustrated by the literature, history, and monuments of art. Must be followed in the second semester by Latin 16, Roman Civilization. The two semesters together constitute the course in Classical Civilization. *Professors* ALLINSON *and* TERRELL.

Three hours. First semester. Required in the Freshman or Sophomore year of all candidates for the degree of Bachelor of Philosophy. Not elective. *1st div., Mon., Th., Fri., at 9.20; 2d div., Mon., Tu., Th., at 11.20.*

### 17, 18. *Greek Seminary*

First semester, Aristotle's *Politics. Professor* TERRELL. Second semester, Aristophanes and the Comic Fragments. *Professor* ALLINSON.

Three hours. Two hours of attendance. Through the year. Elective for Graduates and approved Seniors.

## XIV. HISTORY‡

WILLIAM MACDONALD, PH.D., LL.D., *George L. Littlefield Professor of American History*

THEODORE FRELINGHUYSEN COLLIER, PH.D., *Associate Professor of History*

### 1, 2. *Medieval and Modern History of Europe*

A general survey of the history of western Europe from the time of the barbarian invasions to the present. A narrative text-book supplemented by lectures, frequent written tests, written reports and abstracts on assigned reading, and topics for special investigation. *Professor* MACDONALD.

Three hours. Through the year. Required of candidates for the degree of Bachelor of Arts in the Sophomore or Junior year, and of candidates for the degree of Bachelor of Philosophy in the Freshman, Sophomore, or Junior year. *Mon., Tu., Th., at 2.20.*

### 3. *Early and Medieval Christianity*

A study of the development of Christian thought and institutions from the Apostolic age to the Reformation, with emphasis upon the internal life of the Church rather than upon its external political relations. *Professor* COLLIER.

‡ The elective courses in History are regularly open only to students who have credit for 1, 2, but by special permission of the instructor elective courses may be taken by students who are at the same time taking 1, 2.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. Introductory to 4. *Tu., Th., Sat., at 12.20.*

4. *The Reformation*

The Church on the eve of the Reformation; the Lutheran revolt; Calvinism; the Church of England; Counter-reformation and religious wars; the Thirty Years' war; the Puritan Revolution in England. Parallel study of the development of Protestant doctrine. *Professor* COLLIER.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. A continuation of 3, by which it should preferably be preceded. *Tu., Th., Sat., at 12.20.*

5. *The French Revolution and the Napoleonic Era*

A brief preliminary survey of the international political developments of the eighteenth century, followed by a more detailed study of the causes of the French Revolution, the Revolution itself, and the rise and overthrow of Napoleon. *Professor* COLLIER.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. With 6 constitutes a continuous year's course in modern European history. *Tu., Fri., Sat., at 10.20.*

6. *Europe since 1815*

The reconstruction of Europe after Napoleon; reaction and revolution; the Second Empire; unification of Italy; founding of the German Empire; the Third Republic; the Dual Monarchy; Russia and the Eastern Question; the Dual and Triple Alliances. *Professor* COLLIER.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates who have credit for 5, and for others by special permission.

7. *English History, 1066–1689*

The formation of the English nation; growth of the constitution; economic development; struggle with France; the Tudor monarchy and the Reformation; the Stuarts and the Puritan Revolution; the Revolution of 1689. *Professor* COLLIER.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have credit for 1, 2. Introductory to 8. *Mon., Tu., Th., at 2.20.*

8. *English History, 1689–1895*

Rise of Cabinet government; colonial expansion; the industrial revolution; the struggle with Napoleon; political and social reform; in-

ternational relations in the nineteenth century; Ireland and Home Rule. *Professor* COLLIER.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have credit for 1, 2. A continuation of 7, by which it should preferably be preceded. *Mon., Tu., Th., at 2.20.*

11, 12. *Seminary in European History*

Detailed study of a limited period or of a special phase of social or political development, with a view to training in historical investigation and the use of sources. *Professor* COLLIER.

Three hours. One to two hours of attendance. Through the year. Elective for Graduates and approved Seniors.

13, 14. *American History*

A general course, covering the whole period from the beginnings of English colonization to the present time. Intended as an introduction to the advanced courses in American history and for students who wish only a general survey of the subject. *Professor* MACDONALD.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have credit for 1, 2. Either semester may be elected independently, but 14 should preferably be preceded by 13. *Wed., Fri., Sat., at 11.20.*

[15, 16. *Constitutional and Political History of the United States*]

An advanced course covering the period from 1783 to the present time. Intended primarily for students who wish to specialize in American history or who expect to study law.

Three hours. Two hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1912-13.

17, 18. *Seminary in American History*

Designed to afford training in historical investigation and practice in the use of sources. The subjects vary from year to year, and are drawn from both the colonial and the constitutional periods. For 1912–13 the subjects are: First semester, The relations between the American Colonies and England, 1689–1760. Second semester, The influence of Europe upon American politics and culture, 1815–1850. *Professor* MACDONALD.

Three hours. One to two hours of attendance. Through the year. Elective for Graduates and approved Seniors. Should be preceded by 13, 14, or 15, 16, or 19, 20, but in exceptional cases may be taken by students who at the same time are taking one of these courses.

19. *Social History of America to 1800*

The historical development of political, social, and religious institutions in the colonial and early constitutional periods. *Professor* MacDonald.

Three hours. Two hours of attendance. First semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., at 12.20.*

20. *History of the United States since 1860*

A narrative course dealing especially with legal and constitutional development, party changes, and international relations. Intended primarily for students who wish to specialize in American history or who expect to study law. *Professor* MacDonald.

Three hours. Two hours of attendance. Second semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., at 12.20.*

## XV. INDO-EUROPEAN PHILOLOGY

Francis Greenleaf Allinson, Ph.D., *David Benedict Professor of Classical Philology*

[2. *General Introduction to the Study of Language*]

Outline of the history of language; the Indo-European family. Adapted for students of ancient or modern languages.

Three hours. Second semester. Elective for Freshmen and Sophomores. Not offered in 1912–13.

4. *Seminary in Comparative Philology*

For advanced students in Greek and Latin.

Three hours. Two hours of attendance. Second semester. Elective for Graduates and approved Seniors.

5, 6. *Sanskrit, Elementary Course*

Whitney's *Grammar;* Lanman's *Reader;* selections from the *Vedic Hymns.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates.

7, 8. *Sanskrit, Advanced Course*]

*Vedic Hymns,* and other selections.

One hour. Through the year. Elective for students who have credit for 5, 6. Not offered in 1912–13.

## XVI. MATHEMATICS

NATHANIEL FRENCH DAVIS, A.M., LL.D., *Professor of Pure Mathematics*

HENRY PARKER MANNING, PH.D., *Associate Professor of Pure Mathematics*

ROLAND GEORGE DWIGHT RICHARDSON, PH.D., *Associate Professor of Pure Mathematics*

RAYMOND CLARE ARCHIBALD, PH.D., *Assistant Professor of Pure Mathematics*

CLINTON HARVEY CURRIER, A.M., *Instructor in Mathematics*

### INTRODUCTORY STATEMENT‡

*For students who presented only Algebra and Plane Geometry for admission.* Candidates for the degree of Bachelor of Arts, and candidates for the degree of Bachelor of Philosophy who do not intend to take Argumentation in the Sophomore year, are required to take one of the following combinations of courses: (A) 1, 2; (B) 3, 4; (C) 3, 2. Students who intend to specialize in Mathematics are advised to take both 1, 2 and 3, 4, or 17, 18; but if only three hours can be taken in the Freshman year, it is advisable to elect 3, 2.

*For students who present Solid Geometry and Plane Trigonometry for admission.* Candidates for the degree of Bachelor of Arts, and those candidates for the degree of Bachelor of Philosophy who do not elect to take Argumentation in the Sophomore year, are required to take one of the following combinations of courses: (A) 3, 4; (B) 5, 6; (C) 5, 12. Students who intend to specialize in Mathematics are advised to take both 3, 4 and 5, 6; but if only one course can be taken in the Freshman year, it is advisable to elect 5, 6.

### 1. *Solid and Spherical Geometry*

*Professors* MANNING, RICHARDSON, *and* ARCHIBALD, *Mr.* CURRIER.

‡ Students wishing to specialize in Mathematics should take the undergraduate courses in the order 3, 2, 5, 6, 7, 8, 9, 10. Courses 1, 4, 12, 14, 15, together with as many of courses 21-44 as is possible, should be taken as opportunity offers in connection with the other courses.

It is recommended that students who contemplate teaching in the secondary schools elect courses 1-8, 43, 44, and at least one other course for a year.

Courses 9a, 17, 18, 19, 20 are for candidates for the degree of Bachelor of Science.

Courses 21-30 are designed primarily for Graduates. Two or three of these courses are offered each year according to the needs of students. For those who have taken all of them, other courses can usually be arranged.

Unless elected by three students, courses 10, 12, 15, 21-30, 43, 44 may not be given.

Three hours. First semester. Required as noted in Introductory Statement. Elective for other Undergraduates who did not present Solid Geometry for admission. *One division, Mon., Wed., Fri., at 8; two divisions, Mon., Th., Fri., at 9.20; two divisions, Tu., Wed., Sat., at 9.20.*

### 2. *Plane Trigonometry*

*Professors* DAVIS *and* MANNING, *Mr.* CURRIER.

Three hours. Second semester. Required as noted in Introductory Statement. Elective for other Undergraduates who did not present Plane Trigonometry for admission. *One division, Mon., Wed., Fri., at 8; two divisions, Mon., Th., Fri., at 9.20; two divisions, Tu., Wed., Sat., at 9.20.*

### 3. *Algebra*

*Professors* MANNING *and* RICHARDSON.

Three hours. First semester. Required as noted in Introductory Statement. Elective for Undergraduates. *Mon., Th., Fri., at 9.20.*

### 4. *Algebra*

*Professor* MANNING.

Three hours. Second semester. Required as noted in Introductory Statement. Elective for students who have credit for 3. *Mon., Th., Fri., at 9.20.*

### 5. *Plane Analytic Geometry*

*Professor* DAVIS.

Three hours. First semester. Required as noted in Introductory Statement. Elective for students who have credit for Plane Trigonometry. *Tu., Wed., Sat., at 9.20.*

### 6. *Differential Calculus*

*Professor* DAVIS.

Three hours. Second semester. Required as noted in Introductory Statement. Elective for students who have credit for 5. *Tu., Wed., Sat., at 9.20.*

### 7, 8. *Differential and Integral Calculus*

A continuation of 6. Granville's *Differential and Integral Calculus* (revised edition) will be used. *Professor* ARCHIBALD.

Three hours. Through the year. Elective for students who have credit for 6. *Tu., Th., Sat., at 12.20.*

### 9. *Differential Equations*

*Professor* MANNING.

Three hours. First semester. Elective for students who have credit for 8 or 20. *Tu., Th., Sat., at 12.20.*

9 a. *Differential Equations*

*Professor* MANNING.

Two hours. First semester. Required of candidates for the degree of Bachelor of Science in Electrical Engineering. *Tu., Th., at 12.20.*

10. *Differential Equations*

*Professor* MANNING.

Three hours. Second semester. Elective for students who have credit for 9. *Tu., Th., Sat., at 12.20.*

12. *Modern Analytic Geometry*

*Professor* MANNING.

Three hours. Second semester. Required as noted in Introductory Statement. Elective for students who have credit for 5. *Mon., Wed., Fri., at 12.20.*

[14. *Solid Analytic Geometry*]

*Professor* ARCHIBALD.

Three hours. Second semester. Elective for students who have credit for 5. Not offered in 1912–13.

15. *Spherical Trigonometry*

*Mr.* CURRIER.

Two hours. First semester. Elective for students who have credit for Plane Trigonometry, and have not taken Spherical Trigonometry in college. *Mon., Wed., at 8.*

17, 18. *Engineering Mathematics*

Advanced Algebra. Plane and Spherical Trigonometry, Analytic Geometry. *Professors* DAVIS, MANNING, *and* ARCHIBALD, *Mr.* CURRIER.

Six hours. Through the year. Required of candidates for the degree of Bachelor of Science. *Mon., Tu., Wed., Th., Fri., Sat., at 11.20.*

19, 20. *Differential and Integral Calculus*

*Professors* DAVIS *and* RICHARDSON.

Four hours. Through the year. Required of candidates for the degree of Bachelor of Science. *One division, Tu., Wed., Sat., at 9.20, Th. at 8; one division, Tu., Fri., Sat., at 10.20, Wed. at 8.*

[21, 22. *Function Theory of a Complex Variable*]

Three hours. Through the year. Elective for Graduates and approved Seniors. Not offered in 1912–13.

[23, 24. *Differential Equations, Advanced Course*]

Three hours. Through the year. Elective for Graduates who have credit for 21, 22. Not offered in 1912–13.

25, 26. *Advanced Algebra*

Among the subjects discussed are the following: linear dependence; systems of linear equations; linear transformations; algebraic invariants; bilinear and quadratic forms; factoring of polynomials in one and in several variables. *Professor* RICHARDSON.

Three hours. Through the year. Elective by special permission of the instructor.

27, 28. *Projective Geometry*

*Professor* ARCHIBALD.

Three hours. Through the year. Elective for Graduates and approved Seniors.

29, 30. *Function Theory of a Real Variable*

The foundations of the differential calculus; definite integrals; line integrals; multiple integrals; infinite series. *Professor* RICHARDSON.

Three hours. Through the year. Elective for students who have credit for 25, 26, and for others by special permission.

43, 44. *Foundations, Methods, and Problems of Geometry*

Designed for those who expect to teach Mathematics. The principal subjects included in the course will be: foundations (considerable time will be devoted to this topic); Euclid and his modern rivals; American, English, French, German, and Italian texts; Euclidean, Mascheronian, and Steinerian constructions; methods for problem-solving; geometrography; famous problems; history. *Professor* ARCHIBALD.

Three hours. Through the year. Elective for students who have credit for 3, 4, or 25, 26, and for others by special permission.

## XVII. MECHANICAL ENGINEERING‡

WILLIAM HERBERT KENERSON, M.E., A.M., *Professor of Mechanical Engineering*

THURSTON MASON PHETTEPLACE, M.E., A.M., *Assistant Professor of Mechanical Engineering*

HENRY DEWEES CADY, *Instructor in Shop Practice*

JAMES ALEXANDER HALL, A.B., Sc.B., *Instructor in Mechanical Engineering*

1. *Wood-work*

Exercises in carpentry and wood-turning. Assigned reading and written reports. *Mr.* CADY.

Two hours. Five hours of attendance. First semester. *Tu., 2 to 5; Fri., 2 to 4.*

2. *Wood-work*

Exercises in pattern-making. Assigned reading and written reports. *Mr.* CADY.

Two hours. Five hours of attendance. Second semester. *Mon., Th., 2 to 4; Wed. at 11.20.*

3, 4. *Metal-work*

Exercises in chipping and filing; the use of machine tools; forging and hardening tools, etc. Assigned reading and written reports. *Mr.* CADY.

Two hours. Five hours of attendance. Through the year. First semester, *Mon. at 10.20; Tu., Fri., 2 to 4.* Second semester, *Wed., 2 to 4; Fri., 2 to 5.*

5. *Metal-work*

Exercises in chipping and filing; the use of machine tools; forging and hardening tools, etc. Assigned reading and written reports. *Mr.* CADY.

Three hours. Seven hours of attendance. First semester. *Tu., Fri., 2 to 5; Fri. at 9.20.*

6. *Wood-work*

Exercises in carpentry, wood-turning, and pattern-making. *Mr.* CADY.

Three hours. Seven hours of attendance. Elective in either semester for Sopho-

‡ All the courses in this department except 6 and 7 are required of candidates for the degree of Bachelor of Science in Mechanical Engineering, and, with the exception of 1-5, are elective for other students.

mores, Juniors, and Seniors, who have had instruction in drawing. First semester, *Tu., Fri., 2 to 5.* Second semester, *Mon., Th., 2 to 5.*

### 7. *Metal-work*

Exercises in chipping and filing; the use of machine tools; forging and hardening tools, etc. *Mr.* CADY.

Three hours. Seven hours of attendance. Elective in either semester for Sophomores, Juniors, and Seniors who have had instruction in drawing. First semester, *Tu., Fri., 2 to 5.* Second semester, *Mon., Th., 2 to 5.*

### 8. *Kinematics*

Velocity ratios, rolling surfaces, cams, and belting. Recitations, drawing, and the solution of problems. *Professor* PHETTEPLACE.

Three hours. Seven hours of attendance. Second semester. Elective for students who have credit for Mechanical Drawing 5. *Tu. at 12.20 and 2.20 to 5.20; Fri., 2.20 to 5.20.*

### 9, 10. *Kinematics, continued*

Gearing, linkwork, parallel motions, and gear trains; machine tools; the application of the principles involved. Recitations, drawing, and the solution of problems. *Professor* PHETTEPLACE.

Three hours. Seven hours of attendance. Through the year. Elective for students who have credit for 8 and for Mechanical Drawing 5. *Mon., 2.20 to 5.20; Wed. at 10.20; Th., 2.20 to 5.20.*

### 11, 12. *Machine Design*

Applications of the principles of mechanics and the strength of materials to the design of representative types of boilers, engines, and various mechanisms; solution of problems illustrating the method of designing bolts and nuts, keys, journals and bearings, fly-wheels, valve-gears, etc. Lectures, calculation, and drawing. *Professor* PHETTEPLACE.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 9, 10, and Mechanics 2. *Mon., Th., 10.20 to 1.20.*

### 14. *General Engineering and Design*

Lectures; discussion of special engineering problems, patents and patent law, and cost systems. *Professors* KENERSON *and* PHETTEPLACE.

Two hours. Second semester. *Tu., Wed., 10.20 to 12.20.*

### 15, 16. *Thermodynamics*

Applications of the principles of gases and vapors to steam, gas, and

other heat engines, air-compressors, refrigerating apparatus, etc.; discussion of the energy of fuel and the utilization of such energy for power purposes by means of various media; laws of the relation of variations of pressure, temperature, and volume of such media; analysis of the various cycles used in heat engines; the principles of the injector and the ejector. *Professor* KENERSON *and Mr.* HALL.

Three hours. Through the year. Elective for students who have credit for Physics 1, 2. *Tu., Wed., Sat., at 9.20.*

### 17, 18. *Engineering Practice*

Applications of the principles of thermodynamics and mechanics to the production, transmission, utilization, and measurement of power; valves and valve gears, and valve setting; indicator practice and tests of various forms of steam engines, gas engines, etc.; standardization of auxiliary apparatus used in making the various tests; boiler testing; flue gas and fuel analysis, etc. Lectures, recitations, and laboratory work. *Professor* KENERSON *and Mr.* HALL.

Three hours. Through the year. Elective for students who have credit for or are taking 15, 16. *Wed., Fri., Sat., at 8.*

### 19, 20. *Materials of Engineering*

Study of the sources, manufacture, and properties of the important materials used in engineering; laboratory tests to determine the behavior of materials when subjected to tensile, compressive, and torsional stresses; mixing and testing of cements and mortars; preparation and examination of sections for the microscopical study of the structure of metals and alloys. Lectures, recitations, and laboratory work. *Professor* KENERSON *and Mr.* HALL.

Three hours. Through the year. Elective for students who have credit for or are taking Mechanics 1. *Tu., Fri., at 10.20. 1st div., Mon., 9.20 to 11.20; 2d div., Tu., 3.20 to 5.20; 3d div., Th., 3.20 to 5.20; 4th div., Mon., 3.20 to 5.20.*

### 21. *Power Plant Engineering*

Discussion of the relation and coördination of the various parts of the complete power plant; management, and methods of determining efficiency; selection of the best equipment from manufacturers' catalogues and actual inspection. Lectures, recitations, tests, and tours of inspection. *Professor* PHETTEPLACE.

Three hours. First semester. Elective for students who have credit for 15, 16. *Tu., Fri., 2.20 to 5.20; Wed., Sat., at 9.20.*

*22. Advanced Laboratory Course*

Steam, gas, and power engineering. Particular emphasis laid on preparation and form of reports. *Professor* KENERSON *and Mr.* HALL.

Three hours. Second semester. *Tu., Fri., 2 to 5.*

*24. Applied Hydraulics*

Laboratory experiments in connection with Mechanics 4. *Professor* KENERSON *and Mr.* HALL.

One hour. Second semester. Must be taken with Mechanics 4 and Civil Engineering 34.

*25, 26. Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Mechanical Engineering. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

## XVIII. MECHANICS AND MECHANICAL DRAWING

OTIS EVERETT RANDALL, PH.D., *Professor of Mechanics and Mechanical Drawing*

ANSEL BROOKS, PH.B., M.E., *Associate Professor of Mechanics and Mechanical Drawing*

JOHN JOSEPH LONG, PH.B., *Instructor in Mechanical Drawing*

### MECHANICS

*1, 2. Mechanics of Solids*

Statics, including resolution and composition of forces, determination of center of gravity, and problems relative to rigid bodies and flexible cords; dynamics, including rectilinear and curvilinear motion, virtual velocity, moment of inertia, work, energy and power, and friction; strength of materials, including tension, compression, shearing, torsion, and flexure; methods of graphical solution of problems. *Professors* RANDALL *and* BROOKS.

Four hours. Through the year. Required of candidates for the degree of Bachelor of Science. Elective for students who have credit for Mathematics 7, 8. *Mon., Tu., at 11.20; Th., 10.20 to 12.20.*

### 3. *Mechanics of Fluids*

Hydrostatics; nature and use of instruments; flow through orifices, over weirs, through tubes, through pipes, in conduits; flow of rivers; water supply and water power. *Professors* RANDALL *and* BROOKS.

Three hours. First semester. Required of candidates for the degree of Bachelor of Science. Elective for students who have credit for 1, 2. *Wed., Fri., Sat., at 11.20.*

### 4. *Applied Hydraulics*

Dynamics of water; theoretical consideration of water wheels, pumps, and pumping machinery. *Professors* RANDALL *and* BROOKS.

One hour. Second semester. Required of candidates for the degree of Bachelor of Science. Elective for students who have credit for 3. Must be taken with Civil Engineering 34, and Mechanical Engineering 24. *Wed. at 11.20.*

### 5, 6. *Mathematical Mechanics*

Comprehensive treatment of the principles of statics and dynamics; strength of materials; higher theoretical and practical problems. Intended primarily for students who are interested in the application of the principles of pure mathematics. *Professor* RANDALL.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for Mathematics 7, 8.

## MECHANICAL DRAWING

### 1, 2. *Elementary Mechanical Drawing*

Nature, care, and use of drafting instruments; lettering; plane problem construction; curve tracing; elementary projection. *Professor* BROOKS *and Mr.* LONG.

Two hours. Four hours of drawing. Through the year. Required in the Freshman year of candidates for the degree of Bachelor of Science. *Tu., Fri., 2.20 to 4.20.*

### 3, 4. *Descriptive Geometry*

Discussion, proof, and graphic solution of problems relating to the point, line, and plane, line and surface generation and classification, surface tangency, intersections, and developments; application of the principles of descriptive geometry in isometric drawing, shades and shadows and perspective, machine drawing, and practical engineering problems. *Professor* BROOKS *and Mr.* LONG.

Four hours. Two hours of recitation and three hours of drawing. Through the year. Required in the Sophomore year of candidates for the degree of Bachelor of Science. Elective for students who have credit for 7, 8. *Mon., Tu., Th., Fri., Sat., at 9.20; Tu., Sat., at 10.20.*

### 5. *Machine Drawing*

Study and representation of machine parts; the principles of elementary machine design; sketches, detail, and assembly drawings of machines; practice in reading drawings. *Professor* Brooks *and Mr.* Long.

Three hours. One hour of recitation and eight hours of drawing. First semester. Required of candidates for the degree of Bachelor of Science in Mechanical Engineering or Electrical Engineering. Elective for students who have credit for 7, 8. *Tu. at 12.20; Mon., Th., 2.20 to 5.20.*

### 7, 8. *Elementary Mechanical Drawing*

Nature, care, and use of drafting instruments; lettering; plane problem construction; curve tracing; elementary projection. *Professor* Brooks *and Mr.* Long.

Three hours. Six hours of drawing. Through the year. Elective for Undergraduates. *Tu., Fri., 2.20 to 4.20.*

## XIX. MUSIC

Hamilton Crawford Macdougall, Mus.D., *Lecturer in Music*

### 3. *Advanced Harmony*

A sequel to Elementary Harmony [Music 2. See Catalogue 1911–12]. A course in the harmonization of melodies and basses; the nature and use of the various diatonic and chromatic chords in the major and minor keys; non-harmonic tones; modulation; the writing of pieces in the smaller monophonic forms, such as the song, anthem, part-song, short pieces for piano, piano and violin, etc. Frequent tests; daily work.

Three hours. First semester. Elective for students who have credit for Elementary Harmony [Music 2] or its equivalent. *Mon., Wed., at 12.20.*

### 4. *The Opera*

The development of the opera from 1600 to the present day. Designed to give familiarity with the more famous operas, especially

those in the modern operatic repertoire. Assigned readings, written tests, written reports.

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors. No previous knowledge of music required. *Mon., Wed., at 12.20.*

## XX. PHILOSOPHY

William Herbert Perry Faunce,† A.M., D.D., LL.D., *Professor of Moral and Intellectual Philosophy*

Edmund Burke Delabarre, Ph.D., *Professor of Psychology*

Walter Goodnow Everett, Ph.D., *Professor of Philosophy and Natural Theology*

Alfred Harrison Jones, Ph.D., *Assistant Professor of Logic*

Harris Merrill Barbour, A.B., B.D., *Assistant in Philosophy*

### 1, 2. *Logic*

A study of the aims, concepts, problems, methods, and results of thinking; a preparation for work in the sciences and in philosophy. The main topics are the logic of deduction, the definition of truth, and the relations of science, philosophy, and religion. *Professor* Jones.

Three hours. Through the year. Elective for Sophomores and Juniors. *Mon., Th., Fri., at 9.20.*

### 3, 4. *Psychology and Ethics*

First semester, Psychology. A survey of the main facts and laws of mental life, aiming to provide a sound foundation for further acquaintance with this and allied subjects, for an improved judgment in dealing with many practical problems, and for understanding the psychological bases of philosophy. Second semester, Ethics. An introductory course dealing in a concrete way with the moral values of daily experience, and intended to aid the student in forming a practical philosophy of life. First semester, *Professor* Delabarre. Second semester, *Professor* Everett. [This year *Professor* Jones.]

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Either semester may be elected independently by Seniors only. *Tu., Wed., Sat., at 9.20.*

### 5, 6. *Psychology, Intermediate Course*

A study of the fundamental principles on which a scientific system

† On leave of absence during the academic year 1912–13.

of psychology must be based. The nature and composition of consciousness, its relation to bodily processes, and its complete subjection to law. The criteria for accepting evidence and forming sound judgments in connection with the problems of so-called "psychical research." *Professor* DELABARRE.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for a course in Psychology.

### 7, 8. *History of Philosophy*

The successive philosophical systems as revealing the logical development of European philosophy. The treatment also aims to exhibit the significant relations which philosophy has sustained to civilization, especially in its fundamental political, scientific, religious, and cultural elements. *Professor* EVERETT.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

### 9. *Philosophy of Religion*

A study of the nature of the religious consciousness, and of the ultimate problems of religious psychology and belief. *Professor* EVERETT. [This year *Professor* JONES.]

Three hours. First semester. Elective for Juniors, Seniors, and Graduates who have credit for a year course in Philosophy. *Tu., Wed., Sat., at 9.20.*

### 10. *Applications of Psychology*

Description of some of the important ways in which the principles of psychology are being practically applied to the problems of modern life. *Professor* DELABARRE.

Three hours. Second semester. Elective for students who have credit for 3. *Tu., Wed., Sat., at 9.20.*

### 11, 12. *Experimental Psychology, Introductory Laboratory Course*

Description of the main lines and results of experimental research; demonstrations by the instructor or the class; training in the use of apparatus and in careful scientific observation and measurement. *Professor* DELABARRE.

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 3.

### [13, 14. *Problems of Modern Philosophy*]

A seminary course designed to give acquaintance with current philosophical problems and discussions.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for a year course in Philosophy. Not offered in 1912–13.

15, 16. *Kantian and Post-Kantian Philosophy*

Kant's *Critique of Pure Reason* studied as a source of modern philosophical theories. *Professor* JONES.

Three hours. Through the year. Elective for Seniors who have credit for 7, 8, and for Graduates.

17, 18. *Psychology, Advanced Course*

A seminary for the discussion of important problems in psychology. The problems discussed will vary, and the course may be taken for two or more years. *Professor* DELABARRE.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 5, 6.

19, 20. *Experimental Psychology, Advanced Laboratory Course*

The aim is to study further the problems of experimental psychology, and, whenever possible, to make original contributions to scientific knowledge. The problems investigated will vary, and the course may be taken for two or more years. *Professor* DELABARRE.

One to six hours. Two to twelve hours of attendance. Through the year. Elective for students who have credit for 11, 12. May be taken for more than six hours by Graduates.

21, 22. *Advanced Ethics*

A seminary course for the study of the more important problems of ethical theory. Lectures, written reports, and discussions. Subject for 1912–13: Problems in Practical Ethics. *Professor* EVERETT.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for a year course in philosophy. [This year for Graduates only.]

[23, 24. *Philosophical Seminary*]

A seminary for the study of the problems of historical and contemporary thought. Reading, written reports, and discussions.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for a year course in philosophy. Not offered in 1912–13.

## XXI. PHYSICS

CARL BARUS, PH.D., LL.D., *Hazard Professor of Physics*
ALBERT DEFOREST PALMER, PH.D., *Associate Professor of Physics*
ARTHUR EUGENE WATSON, PH.D., *Assistant Professor of Physics*
ROBERT FRANKLIN FIELD, A.M., *Instructor in Physics*
PAUL HART FRANCIS, SC.B., *Assistant in Physics*

### 1, 2. *Elementary Physics* ‡

Designed for those who have had little previous training in physics. First semester, dynamics, molecular physics, and heat. Second semester, optics, acoustics, and electricity. The more elementary features of the subjects discussed. Lectures illustrated by experiments and the lantern; weekly written exercises. *Professor* BARUS.

Three hours. Through the year. Required of all candidates for the degree of Bachelor of Science. Elective for Undergraduates who have credit for entrance algebra and plane geometry. *Mon., Wed., Th., at 10.20.*

### 3, 4. *Elementary Physics, continued* §

Treats the more advanced parts of the subjects taken in the same order as in the preceding course. *Professor* BARUS.

Three hours. Through the year. Elective for students who have credit for 1, 2, and Mathematics 1, 2. *Tu., Fri., Sat., at 10.20.*

### 5, 6. *Experimental Physics*

An introduction to the theory and practice of physical manipulation. Experimental study of physical phenomena selected to meet the needs of individual students. Written reports and solution of problems. *Professor* PALMER.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2.

### 7, 8. *Mathematical Treatment of Dynamical Problems* ‖

First semester, discussion of the general principles of dynamics and the development of the general equations of motion. Second semester, application of these principles to special problems in thermodynamics and hydrodynamics. *Professor* PALMER.

‡ Students who intend to teach physics should elect courses 1, 2; 3, 4; 5, 6.
§ Graduates taking course 3, 4 are held responsible for all the demonstrations, or for the full equivalent of either Watson's or Daniel's *Principles of General Physics.*
‖ In determining which of the two courses 7, 8, and 9, 10, shall be offered in any given year, the preference of students will be considered.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for 5, 6, and Mathematics 9, 10.

9, 10. *Mathematical Theory of Electricity and Magnetism* ‡

Includes a discussion of the more important problems of electrical science. *Professor* PALMER.

Three hours. Through the year. Elective for Graduates and Seniors who have credit for 5, 6, and Mathematics 9, 10.

11, 12. *Advanced Laboratory Course*

Special problems and reference to original sources for methods of solution. *Professors* BARUS, PALMER, *and* WATSON.

Three or six hours. Six or twelve hours of attendance. Through the year. Elective for students who have credit for 5, 6.

13, 14. *Applied Harmonic Analysis and Applied Vector Analysis* §

Importance of Fourier's method shown by examples drawn from the analytical theory of heat, from elastics, alternating electricity, and elsewhere; treatment by the aid of spherical harmonics. Bessel functions and Lamé functions; the chief theorems of vector analysis deduced and applied to dynamics, elastics, hydrodynamics, the electro-magnetics of Maxwell and Hertz, and the electronic theory of Heaviside, Lorentz, and others. *Professor* BARUS.

Three hours. Through the year. Required in the second semester of candidates for the degree of Bachelor of Science in Electrical Engineering. Elective for Seniors and Graduates who have credit for 1, 2, and Mathematics 7, 8.

15, 16. *Physics, Advanced Course* §

Lectures on dynamics, potential, elastics, hydrostatics, hydrodynamics, viscosity, capillarity, electrostatics, magnetism, electro-magnetism, thermo-electrics, induction, Fresnel's optics, the electromagnetic theory of light, thermal analytics, and thermodynamics. *Professor* BARUS.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for Mathematics 7, 8.

21, 22. *Theory of Measurements*

Lectures and recitations on the theory and precision of measurements,

‡ In determining which of the two courses 7, 8, and 9, 10, shall be offered in any given year, the preference of students will be considered.

§ In determining the content of courses 13, 14, and 15, 16, the preference of students will be considered.

and on methods of taking, recording, and reducing observations; laboratory instruction in selected physical measurements. *Professor* PALMER *and Mr.* FRANCIS.

Three hours. Five hours of attendance. Through the year. Required of candidates for the degree of Bachelor of Science. Elective for students who have credit for 1, 2, and Mathematics 7, 8, or 19, 20. *Mon., Fri., at 12.20.* Laboratory hours will be posted in 11 Wilson Hall on the first day of each term.

### 23, 24. *Precision Measurements in Photometry, Electricity, and Magnetism*

*Professor* PALMER.

Four hours. Eight hours in the laboratory. Through the year. Elective for students who have credit for 5, 6, or 21, 22, and Mathematics 7, 8, or 19, 20.

### 25, 26. *Radiation, Optics, and Heat*

Experimental study of selected phenomena; demonstrations and personal conferences. *Professor* PALMER.

Three or six hours. Six or twelve hours in the laboratory. Through the year. Elective for students who have credit for 5, 6, or 21, 22.

## ELECTRICAL ENGINEERING‡

*Professor* WATSON *and Mr.* FIELD

### 1, 2. *General Course*

Methods of generating and utilizing electric currents; theory and working of dynamo-electric machinery.

Three hours. Two hours of recitation or lecture and two hours in the laboratory. Elective for students who have credit for or are taking Physics 5, 6, or 21, 22, and Mathematics 6 or 19. First semester, *Mon., Th., at 9.20.* Second semester, *Mon., Fri., at 9.20.* Laboratory assignments for afternoons.

### 3, 4. *Alternating Currents*

Mathematical and graphical treatment.

Three hours. Two hours of recitation or lecture and two hours in the laboratory. Through the year. Elective for students who have credit for 2, and who have credit for or are taking Mathematics 9. *Tu., Fri., at 10.20.* Laboratory assignments for afternoons.

‡ All the courses in Electrical Engineering are required of candidates for the degree of Bachelor of Science in Electrical Engineering. 1, 2 is required of candidates for the degree of Bachelor of Science in Mechanical Engineering. 1 is required of candidates for the degree of Bachelor of Science in Civil Engineering.

6. *Calculation and Design of Direct Current Electrical Machinery*

Three hours. Second semester. Must be taken with 2. Not elective. *Tu., Wed., Th., at 9.20.*

7. *Telegraph and Telephone Engineering*

Three hours. First semester. Elective for students who have credit for 2. *Mon., Wed., Th., at 10.20.*

8. *Alternating Current Machinery*

Calculation and design of generators, motors, transformers, etc.

Three hours. Second semester. Must be taken with 10. Elective for students who have credit for 1, 2, and 3. *Mon., Th., Fri., at 9.20.*

10. *Power and Lighting Stations*

Equipment and systems of distribution.

Three hours. Second semester. Must be taken with 8. Elective for students who have credit for 1, 2, and 3. *Mon., Wed., Th., at 10.20.* Weekly trips of inspection.

12. *Electrical Engineering Problems*

Reading and discussion. Seminary method.

One hour. Second semester. Not elective. *Mon. at 11.20.*

13, 14. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Electrical Engineering. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

## XXII. ROMAN LITERATURE AND HISTORY

Albert Granger Harkness, A.M., Litt.D., *Professor of Roman Literature and History*

John Francis Greene, A.M., *Associate Professor of Roman Literature and History*

1. *Livy*

Designed to enable the student to acquire facility in reading Latin and to instruct him in the use of the Latin texts as a means of gain-

ing a knowledge of Roman history. Grammatical study and literary criticism also receive attention. *Professors* HARKNESS *and* GREENE.

Three hours. First semester. Elective for students who presented elementary and advanced Latin for admission. *1st div., Wed., Fri., Sat., at 11.20; 2d div., Tu., Th., Sat., at 12.20.*

*2. Cicero's Letters*

Aims and methods as in 1. *Professors* HARKNESS *and* GREENE.

Three hours. Second semester. Elective for students who presented elementary and advanced Latin for admission. *1st div., Wed., Fri., Sat., at 11.20; 2d div., Tu., Th., Sat., at 12.20.*

*3. Horace's Odes and Epodes, Tibullus, Propertius*

Critical study of the poems, supplemented by rapid reading with a view to comprehending the spirit of the author. The literary side of the study is made prominent. Lectures; literary topics assigned to the class for special study. *Professor* GREENE.

Three hours. First semester. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

*4. Horace's Satires and Epistles, Juvenal*

Aims and methods as in 4. *Professor* HARKNESS.

Three hours. Second semester. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

[5, 6. *Latin Poetry*]

Aims to give a connected and comprehensive view of the history and development of Latin poetry. Lectures on the lives and writings of the authors; reading of characteristic selections; special study of assigned topics in literary history and criticism by members of the class. First semester, Plautus. Second semester, Lucretius and Catullus. Forms with 7, 8 a two-year consecutive course, affording a general survey of Roman literature.

Three hours. Through the year. Elective for Juniors and Seniors. Either semester may be elected independently. Not offered in 1912–13.

7, 8. *Latin Prose*

Aims to give a connected and comprehensive view of the history and development of Latin prose. Lectures on the lives and writings of the authors, on the development of oratory, etc.; reading of characteristic selections; special study, by members of the class, of assigned topics in literary history and criticism. First semester, specimens of early

Latin, Cicero's *Brutus,* and Quintilian. Second semester, the *Annals* of Tacitus. Forms with 5, 6 a two-year consecutive course, affording a general survey of Roman literature. *Professors* HARKNESS *and* GREENE.

Three hours. Through the year. Elective for Juniors and Seniors. Either semester may be elected independently. *Tu., Wed., Sat., at 9.20.*

### 9, 10. *Petronius, Pliny the Younger, Martial*

*Professor* HARKNESS.

One hour. Through the year. Elective for Juniors, Seniors, and Graduates. *Fri. at 2.20.*

### [11, 12. *Latin Composition*]

One hour. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1912–13.

### 13, 14. *History of the Roman Empire*

The Early Empire. The Age of the Antonines. The Age of Constantine. *Professor* GREENE.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Either semester may be elected independently. *Tu., Wed., Sat., at 9.20.*

### 16. *Roman Civilization*

An outline of Roman civilization and its influence on modern times. Special attention will be given to the literature and to the political and social life. No knowledge of Latin required. Must be preceded in the first semester by Greek 15, Greek Civilization. The two semesters together constitute the course in Classical Civilization. *Professors* HARKNESS *and* GREENE.

Three hours. Second semester. Required in the Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. Not elective. *1st div., Mon., Th., Fri., at 9.20; 2d div., Mon., Tu., Th., at 11.20.*

### 17, 18. *Seminary in Latin*

Subject for 1912–13: Reading from the poetry of the Empire. Gudeman's *Latin Literature of the Empire,* vol. II. Questions in textual criticism and in the structure of Latin verse will be considered. *Professors* HARKNESS *and* GREENE.

Three hours. Two hours of attendance. Through the year. Elective for Graduates.

## XXIII. ROMANCE LANGUAGES AND LITERATURES

COURTNEY LANGDON, A.B., *Professor of the Romance Languages and Literatures*

ALBERT BUSHNELL JOHNSON, A.M., *Associate Professor of the Romance Languages and Literatures*

CHARLES HERMAN HUNKINS, DR. *de l'Université de Paris, Assistant Professor of the Romance Languages and Literatures*

HENRI FELIX MICOLEAU, *Instructor in French*

BERNARD KEENAN, A.M., *Assistant in French*

### 1, 2. *Elementary Course, First Year*

Grammar, composition, dictation, conversation; translation of selections from modern authors into idiomatic English. *Messrs.* MICOLEAU *and* KEENAN.

Three hours. Through the year. Elective for students who did not present French for admission. *1st div., Tu., Th., Sat., at 8; 2d div., Mon., Tu., Th., at 2.20.*

### 3, 4. *Elementary Course, Second Year*

Reading of easy modern French prose in the form of stories, plays, or historical or biographical sketches; review of grammar; composition and conversation based upon the texts read. *Professor* HUNKINS.

Three hours. Through the year. Elective for students who have credit for 1, 2. *Wed., Fri., Sat., at 11.20.*

### 5, 6. *Intermediate Course*

Reading of modern and classical authors; review of grammar; composition and conversation based upon the texts read; dictation. *Professor* HUNKINS, *Messrs.* MICOLEAU *and* KEENAN.

Three hours. Through the year. Elective for students who have credit for 3, 4, or who presented elementary French for admission. *1st div., Wed., Fri., Sat., at 11.20; 2d div., Tu., Th., Sat., at 8; 3d div., Mon., Th., Fri., at 9.20; 4th div., Tu., Th., Sat., at 8.*

### 7, 8. *Advanced Course*

An introduction to classical and modern French literature; composition; conversation based on the texts read; dictation. *Professors* JOHNSON *and* HUNKINS, *Mr.* MICOLEAU.

Three hours. Through the year. Elective for students who have credit for 5, 6, or who presented advanced French for admission. *1st div., Mon., Tu.,*

*Th., at 11.20; 2d div., Mon., Tu., Th., at 11.20; 3d div., Tu., Wed., Sat., at 9.20; 4th div., Tu., Wed., Sat., at 9.20.*

[9, 10. *The Realistic School*]

Flaubert, Augier, the younger Dumas, the Goncourts, Daudet, Zola, Taine, Loti, and others; abstracts, in French, of works read outside the class; sight reading a prominent feature.

Three hours. Through the year. Elective for students who have credit for 7, 8. Not offered in 1912–13.

11, 12. *The Romantic School*

The history of the romantic school; reading of authors from Chateaubriand and Victor Hugo to Rostand; abstracts on outside reading. Lectures in English and in French. *Professor* LANGDON.

Three hours. Through the year. Elective for students who have credit for 7, 8. *Wed., Fri., Sat., at 11.20.*

[13, 14. *The Classical School*]

The history of the classical school; its formation, its apogee, and its decline. Lectures in French.

Three hours. Through the year. Elective for students who have credit for 9, 10, or 11, 12, and for approved students who have credit for 7, 8. Not offered in 1912–13.

15, 16. *Modern Spanish*

Grammar, conversation, composition, and reading of modern authors. *Professor* JOHNSON.

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern language. *Tu., Fri., Sat., at 10.20.*

17, 18. *Modern Italian*

Grammar, composition, and reading of modern authors. *Professor* LANGDON.

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern language. *Mon., Th., Fri., at 9.20.*

19, 20. *Dante in English*

A study of the whole of the *Divina Commedia* in English, in the light of modern thought and of other world-poems. *Professor* LANGDON.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Students are advised to elect this course in their Senior year. *Mon., Tu., Th., at 11.20.*

[21, 22. *Spanish Language and Literature*]

Selected works of classical and modern authors; composition; conversation. *Professor* JOHNSON.

Three hours. Through the year. Elective for students who have credit for 15, 16. Not offered in 1912–13.

23, 24. *Practice in Writing and Speaking French*

Intended especially for those preparing to teach. Written and oral translations from English into French. Recitations and dialogues in French; conversation; dictation; phonetics. *Professor* JOHNSON.

Three hours. Through the year. Elective for students who have credit for 7, 8. *Mon., Th., Fri., at 9.20.*

## XXIV. SOCIAL AND POLITICAL SCIENCE‡

JAMES QUAYLE DEALEY, PH.D., *Professor of Social and Political Science*

LESTER FRANK WARD, A.M., LL.D., *Professor of Sociology*

JOHN CORLISS DUNNING, LL.B., PH.D., *Assistant Professor of Political Science*

### SOCIAL SCIENCE

1. *Elementary Social and Political Science*

Affords a general outline of these subjects and serves as an introduction to the more extended and special courses which follow. *Professor* DEALEY.

Three hours. In connection with Economics 1 constitutes a year course required in Sophomore, Junior, or Senior year of candidates for the degree of Bachelor of Arts and Bachelor of Philosophy, and in Sophomore year of candidates for the degree of Bachelor of Science. The combined courses will be given in two divisions. For the first division Economics will precede Social and Political Science; for the second, the order will be reversed. *1st div., second semester, Tu., Fri., Sat., at 10.20; 2d div., first semester, Mon., Wed., Fri., at 12.20.*

‡ The courses in this department other than 1 are open only to those students who have credit for Social and Political Science 1 and Economics 1.

### 3, 4. *Social Problems and Conditions*

First semester, development of modern social institutions and problems involved; modern domestic institutions. Second semester, modern social problems such as charity, crime, intemperance, immigration, and racial questions of western civilization. Social legislation. *Professor* DEALEY *and Dr.* DUNNING.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Tu., Th., at 11.20.*

### 5, 6. *Origin and Development of Society* ‡

First semester, formation and dispersion of primitive groups; origin of races; union and coalescence of groups; the race struggle; institutions growing out of the race struggle; stages of culture. Second semester, domestic relations; kinship groups; marriage and the family; institutions growing out of domestic relations; gentile society; transition to political society; primary institutions. *Professor* WARD.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.*

### 7. *Sociology as a Science* ‡

Its relations to other sciences; its psychologic basis; its fundamental principles and their sources in the less complex sciences. *Professor* WARD.

Three hours. First semester. Followed in the second semester by 8. Elective for Seniors and Graduates. *Wed., Fri., Sat., at 11.20.*

### 8. *Application of Sociological Principles* ‡

The utility of sociology as a means of increasing human achievement. The improvement of society through conscious effort. Scientific legislation. *Professor* WARD.

Three hours. Second semester. Preceded by either 5, 6, or 7. Elective for Seniors and Graduates. *Wed., Fri., Sat., at 11.20.*

### 9, 10. *Sociological Aspects of Education*

First semester, the sociological theory of education. The social importance of intellectual development and of the diffusion of knowledge. Second semester, the sociological curriculum; survey of the several fields of knowledge in the order of nature. *Professor* WARD.

‡ Course 5, 6 deals with the subject chiefly from the historical standpoint. Course 7 deals mainly with the principles and theory of sociology. Undergraduates should not elect both of these courses in the same year, and 5, 6 should precede 7. Course 8 may properly follow either of these.

Three hours. Through the year. Elective for Seniors and Graduates. *Tu., Fri., 4.30 to 6.*

### 11, 12. *Sociological Theories*

First semester, ancient and medieval theories in respect to social conditions and development; precursors of sociology. Second semester, sociological theories since the opening of the nineteenth century; a review of modern sociological thought in Europe and America and its influence on the life and institutions of society. *Professor* DEALEY.

Three hours. Through the year. Offered if applied for by Graduates.

### 13, 14. *Investigation of Special Topics*

Intended to train the student in methods of gathering, handling, and presenting data in the study of social problems. For the year 1912–13 the subject will be: Social Legislation and Social Welfare. *Professor* DEALEY.

Three hours. Through the year. Elective for Graduates, and for a limited number of approved Juniors and Seniors. Either semester may be elected independently.

## POLITICAL SCIENCE

### 1. *Elementary Political and Social Science*

*See* Social Science 1.

### 3, 4. *Government and Politics of the United States*

First semester, national government, its organization, powers, and methods; current political issues. Second semester, state and municipal governments; framework and activities of European and American municipalities. *Professor* DUNNING.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

### 5. *Governments and Politics of Foreign States*

The political systems of typical leading states, including some of the states of Latin-America. Current international political situations and problems. *Professor* DUNNING.

Three hours. First semester. Followed in the second semester by 6. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Th., at 10.20.*

6. *International Relations*

The development of the science of International Law. The general principles guiding the relations of states. Illustrative concrete cases. *Professor* DUNNING.

Three hours. Second semester. Preceded in the first semester by 5. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Th., at 10.20.*

7. *Jurisprudence*

The development of law and of its fundamental principles. Special reference to Roman law and to the English common law. *Professor* DUNNING.

Three hours. First semester. Followed in the second semester by 8. Elective for Seniors and Graduates. *Tu., Wed., Sat., at 9.20.*

8. *Constitutional Law*

Principles and development of American constitutional law. Case system. *Professor* DUNNING.

Three hours. Second semester. Preceded in the first semester by 7. Elective for Seniors and Graduates. *Tu., Wed., Sat., at 9.20.*

9. *Development of Political Theories*

Classical and medieval political theories. Development of modern democratic theories in England, France, and the United States. *Professor* DEALEY.

Three hours. First semester. Followed in the second semester by 10. Offered if applied for by Graduates.

10. *Modern Theory of the State*

The origin and development of the state, its sovereignty, its governmental organization and functions. Theories underlying the organization of political parties. *Professor* DEALEY.

Three hours. Second semester. Preceded in the first semester by 9. Offered if applied for by Graduates.

11, 12. *Current Social and Political Theory and Practice*

A seminary course. Intended to train students in methods of estimating the value and significance of recent publications on social and political topics. Study of current problems arising through changing social conditions. Special attention is given to publications in German and French. *Professor* DUNNING.

One hour. Through the year. Elective for Graduates and approved Seniors. *Mon. at 5.*

13, 14. *Investigation of Special Topics*

Intended to train students in methods of gathering and presenting data in the study of political problems. In connection with this course, work in comparative legislation may be taken under the direction of the Legislative Reference Bureau of the State Library. *Professor* DEALEY.

Three hours. Through the year. Elective for Graduates, and for a limited number of approved Seniors.

## PHYSICAL TRAINING

FREDERICK WILLIAM MARVEL, PH.B., *Professor of Physical Training*

From Thanksgiving to the Spring Recess, all first and second year students are required to attend gymnasium exercises three times a week as follows:

FRESHMEN. *1st div., Tu., Fri., Sat., at 10.20; 2d div., Mon., Tu., Th., at 4.20.*

SOPHOMORES. *1st div., Mon., Wed., Th., at 10.20; 2d div., Tu., Th., Fri., at 3.20.*

A voluntary class for Juniors and Seniors will be held on *Mon., Tu., Th., Fri., at 5.10.* Classes in heavy gymnastics, under the direction of a special instructor, are held four afternoons a week. Classes in wrestling, under the direction of a special instructor, are held two afternoons a week. Instruction in swimming, under the direction of a special instructor, is given by appointment.

# TABLE OF ELECTIVE COURSES, 1912–13‡

## FIRST SEMESTER

*Art*
1 So. Jr. Sr. Gr.
3 Jr. Sr. Gr.
9 Gr.
15 Fr. So. Jr. Sr.
17 So. Jr. Sr.
19 Jr. Sr.

*Astronomy*
1 So. Jr. Sr.
7 Jr. Sr.
9 Gr. Sr.

*Biblical Literature*
1 Jr. Sr. Gr.
3 Sr. Gr.
5 Gr. Sr.
7 Gr.
8 Sr. Gr.
13 Jr. Sr. Gr.
15 So. Jr. Sr. Gr.
21 Gr. Sr. Jr.
23 Gr.

*Biology*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr.
5 Jr. Sr.
7 Jr. Sr.
9 Jr. Sr. Gr.
11 So. Jr. Sr.
13 Jr. Sr.
17 Jr. Sr. Gr.
19 Fr. So. Jr. Sr.
31 Gr.
33 Gr.
35 Gr.
37 Gr.
39 Gr.
41 Gr.

*Botany*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr. Gr.
7 Gr. Sr. Jr.
11 Jr. Sr. Gr.

*Chemistry*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr.
5 Jr. Sr. Gr.
7 Jr. Sr. Gr.
13 Gr.
17 Gr.
19 Gr.
21 Jr. Sr. Gr.
23 Jr. Sr. Gr.
25 Gr.
27 Sr. Gr.
29 Sr. Gr.
31 Gr.

*Civil Engineering*
1 So. Jr. Sr.
7 Jr. Sr.
9 Jr. Sr.
13 Jr. Sr.
15 Sr.
19 Sr.

*Economics*
1 So. Jr. Sr.
5 Jr. Sr. Gr.
7 Jr. Sr. Gr.
11 Jr. Sr.
13 Jr. Sr.
15 Jr. Sr.
21 Jr. Sr. Gr.
23 Sr. Gr.

*Education*
1 Jr. Sr. Gr.

*Education*
3 Sr. Gr.
5 Gr. Sr.
7 Gr. Sr.
9 Gr. Sr.
11 Gr.
13 Gr. Sr.
15 Gr. Sr.

*Electrical Engineering*
1 Jr. Sr.
3 Sr.
7 Sr.

*English*
3 So.
7 So. Jr. Sr.
9 Jr. Sr.
11 So. Jr.
13 Jr. Sr.
15 Jr. Sr. Gr.
17 Jr. Sr. Gr.
27 Jr. Sr.
35 So. Jr. Sr.
37 So. Jr. Sr.
43 Gr. Sr.

*French*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr.
5 Fr. So. Jr. Sr.
7 Fr. So. Jr. Sr.
11 So. Jr. Sr.
23 So. Jr. Sr.

*Geology*
1 Fr. So. Jr. Sr.
5 Fr. So. Jr. Sr.
9 So. Jr. Sr.
11 Gr. Sr.
13 Jr. Sr. Gr.

‡ Fr., So., Jr., Sr., Gr., indicate that the courses after which these abbreviations stand are open to Freshmen, Sophomores, Juniors, Seniors, or Graduates, respectively.

*German*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr.
5 Fr. So. Jr. Sr.
7 Fr. So. Jr. Sr.
9 Fr. So. Jr. Sr.
13 So. Jr. Sr.
17 So. Jr. Sr.
27 So. Jr. Sr.
31 Gr. Sr.

*Greek*
A Fr. So. Jr. Sr.
1 Fr. So. Jr. Sr.
3 So.
9 Jr. Sr.
17 Gr. Sr.

*History*
3 Jr. Sr. Gr.
5 Jr. Sr. Gr.
7 Jr. Sr. Gr.
11 Gr. Sr.
13 Jr. Sr. Gr.
19 Jr. Sr. Gr.
17 Gr. Sr.

*Italian*
17 So. Jr. Sr.
19 Jr. Sr. Gr.

*Latin*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr.
7 Jr. Sr.
9 Jr. Sr. Gr.
13 So. Jr. Sr.
17 Gr.

*Mathematics*
1 Fr.
3 Fr. So. Jr. Sr.
5 Fr. So. Jr. Sr.
7 So. Jr. Sr.
9 Jr. Sr.
15 Fr. So. Jr. Sr.
25 Gr. Sr. Jr.
27 Gr. Sr.
29 Gr.
43 Jr. Sr. Gr.

*Mechanical Drawing*
3 So. Jr. Sr.
5 So. Jr. Sr.
7 Fr. So. Jr. Sr.

*Mechanical Engineering*
6 So. Jr. Sr.
7 So. Jr. Sr.
9 Jr. Sr.
11 Sr.
15 Jr. Sr.
17 Jr. Sr.
19 Jr. Sr.
21 Sr.

*Mechanics*
1 So. Jr. Sr.
3 Jr. Sr.
5 Sr. Gr.

*Music*
3 Jr. Sr.

*Philosophy*
1 So. Jr. Sr.
3 So. Jr. Sr.
5 Jr. Sr. Gr.
7 Jr. Sr. Gr.
9 Jr. Sr. Gr.
11 Jr. Sr. Gr.
15 Sr. Gr.
17 Jr. Sr. Gr.
19 Sr. Gr.
21 Sr. Gr.

*Physics*
1 Fr. So. Jr. Sr.
3 So. Jr. Sr.
5 So. Jr. Sr.
7 Sr. Gr.
9 Gr. Sr.
11 Jr. Sr. Gr.
13 Sr. Gr.
15 Jr. Sr. Gr.
21 Jr. Sr.
23 Jr. Sr. Gr.
25 Jr. Sr. Gr.

*Political Science*
1 So. Jr. Sr. Gr.
3 Jr. Sr.
5 Jr. Sr. Gr.
7 Sr. Gr.
9 Gr.
11 Gr. Sr.
13 Gr. Sr.

*Sanskrit*
5 Jr. Sr. Gr.

*Social Science*
1 So. Jr. Sr. Gr.
3 Jr. Sr. Gr.
5 Jr. Sr. Gr.
7 Sr. Gr.
9 Sr. Gr.
11 Gr.
13 Gr. Sr. Jr.

*Spanish*
15 So. Jr. Sr.
21 Jr. Sr.

## SECOND SEMESTER

*Art*
2 So. Jr. Sr. Gr.
4 Jr. Sr. Gr.
8 Gr.
16 Fr. So. Jr. Sr.
18 So. Jr. Sr.
19 Jr. Sr.

*Astronomy*
2 So. Jr. Sr.
8 Jr. Sr.
10 Gr. Sr.

*Biblical Literature*
2 Jr. Sr. Gr.
4 Sr. Gr.
6 Gr. Sr.
7 Gr.
8 Sr. Gr.
14 Jr. Sr. Gr.
16 So. Jr. Sr. Gr.
22 Gr. Sr. Jr.
23 Gr.

*Biology*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
6 Jr. Sr.
8 Jr. Sr.
10 Jr. Sr. Gr.
12 So. Jr. Sr.
14 Jr. Sr.
16 So. Jr. Sr.
18 Jr. Sr. Gr.
20 Fr. So. Jr. Sr.
24 Jr. Sr.
32 Gr.
34 Gr.
36 Gr.
38 Gr.
40 Gr.
42 Gr.

*Botany*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr. Gr.
8 Gr. Sr. Jr.
10 Fr. So. Jr. Gr.
12 Jr. Sr. Gr.

*Chemistry*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
6 Jr. Sr. Gr.
8 Jr. Sr. Gr.
10 Sr. Gr.
12 Sr. Gr.
14 Gr.
18 Gr.
20 Jr. Sr. Gr.
22 Jr. Sr. Gr.
24 Jr. Sr. Gr.
26 Gr.
28 Sr. Gr.
30 Sr. Gr.
32 Gr.

*Civil Engineering*
2 So. Jr. Sr.
4 So. Jr. Sr.
6 Jr. Sr.
8 Jr. Sr.
10 Jr. Sr.
12 So. Jr. Sr.
20 Sr.
22 Sr.
24 Sr.
26 Sr.
28 Jr. Sr.
30 Sr.
32 Sr.
34 Sr.

*Economics*
1 So. Jr. Sr.
6 Jr. Sr. Gr.
10 Jr. Sr. Gr.
12 Jr. Sr.
14 Jr. Sr.
16 Jr. Sr.

*Economics*
22 Jr. Sr. Gr.
24 Sr. Gr.

*Education*
2 Jr. Sr. Gr.
4 Sr. Gr.
6 Gr. Sr.
8 Gr. Sr.
10 Gr. Sr.
12 Gr.
14 Gr. Sr.
16 Gr. Sr.

*Electrical Engineering*
2 Jr. Sr.
4 Sr.
8 Sr.
10 Sr.

*English*
4 So.
8 So. Jr. Sr.
10 Jr. Sr.
12 So. Jr.
14 Jr. Sr.
16 Jr. Sr. Gr.
18 Jr. Sr. Gr.
28 Jr. Sr.
36 So. Jr. Sr.
38 So. Jr. Sr.
44 Gr. Sr.
48 So.

*French*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
6 Fr. So. Jr. Sr.
8 Fr. So. Jr. Sr.
12 So. Jr. Sr.
24 So. Jr. Sr.

*Geology*
2 Fr. So. Jr. Sr.
6 Fr. So. Jr. Sr.
8 Fr. So. Jr. Sr.
10 So. Jr. Sr.

*Geology*
12 Gr. Sr.
*German*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
6 Fr. So. Jr. Sr.
8 Fr. So. Jr. Sr.
10 Fr. So. Jr. Sr.
14 So. Jr. Sr.
18 So. Jr. Sr.
28 So. Jr. Sr.
32 Gr. Sr.
*Greek*
B Fr. So. Jr. Sr.
2 Fr. So. Jr. Sr.
4 So.
8 Jr. Sr.
12 So. Jr. Sr.
18 Gr. Sr.
*History*
4 Jr. Sr. Gr.
6 Jr. Sr. Gr.
8 Jr. Sr. Gr.
12 Gr. Sr.
14 Jr. Sr. Gr.
18 Gr. Sr.
20 Jr. Sr. Gr.
*Italian*
18 So. Jr. Sr.
30 Jr. Sr. Gr.
*Latin*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
8 Jr. Sr.
10 Jr. Sr. Gr.
14 So. Jr. Sr.
18 Gr.

*Mathematics*
2 Fr.
4 Fr. So. Jr. Sr.
6 Fr. So. Jr. Sr.
8 So. Jr. Sr.
10 Jr. Sr.
12 Fr. So. Jr. Sr.
26 Gr. Sr. Jr.
28 Gr. Sr.
30 Gr.
44 Jr. Sr. Gr.
*Mechanical Drawing*
4 So. Jr. Sr.
8 Fr. So. Jr. Sr.
*Mechanical Engineering*
6 So. Jr. Sr.
7 So. Jr. Sr.
8 So. Jr. Sr.
10 Jr. Sr.
12 Jr. Sr.
16 Jr. Sr.
18 Jr. Sr.
20 Jr. Sr.
*Mechanics*
2 So. Jr. Sr.
4 Jr. Sr.
6 Sr. Gr.
*Music*
4 So. Jr. Sr.
*Philology*
4 Gr. Sr.
*Philosophy*
2 So. Jr. Sr.
4 So. Jr. Sr.
6 Jr. Sr. Gr.
8 Jr. Sr. Gr.
10 So. Jr. Sr.
12 Jr. Sr. Gr.

*Philosophy*
16 Sr. Gr.
18 Jr. Sr. Gr.
20 Sr. Gr.
22 Sr. Gr.
*Physics*
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
6 So. Jr. Sr.
8 Sr. Gr.
10 Gr. Sr.
12 Jr. Sr. Gr.
14 Sr. Gr.
16 Jr. Sr. Gr.
22 Jr. Sr.
24 Jr. Sr. Gr.
26 Jr. Sr. Gr.
*Political Science*
1 So. Jr. Sr.
4 Jr. Sr.
6 Jr. Sr. Gr.
8 Sr. Gr.
10 Gr.
12 Gr. Sr.
14 Gr. Sr.
*Sanskrit*
6 Jr. Sr. Gr.
*Social Science*
1 So. Jr. Sr. Gr.
4 Jr. Sr. Gr.
6 Jr. Sr. Gr.
8 Sr. Gr.
10 Sr. Gr.
12 Gr.
14 Gr. Jr. Sr.
*Spanish*
16 So. Jr. Sr.
22 Jr. Sr.

# LIBRARIES, LABORATORIES, AND MUSEUMS

## LIBRARIES

THE libraries of the University contain two hundred and fifteen thousand volumes. They comprise the UNIVERSITY LIBRARY, which occupies the John Hay Library Building; the JOHN CARTER BROWN LIBRARY, also with its own building; and the DEPARTMENT LIBRARIES, in the various seminary rooms and laboratories.

### THE UNIVERSITY LIBRARY

HARRY LYMAN KOOPMAN, A.M., LITT.D., *Librarian*

THE MAIN LIBRARY is constantly increased with reference to the different courses of study, while at the same time there is kept in view the development of a library of general culture. It includes six special libraries. The first is the Harris Collection of American Poetry, founded by Albert G. Greene, of the class of 1820, extended by C. Fiske Harris, and bequeathed to the University by the Hon. Henry B. Anthony, of the class of 1833, which numbers thirteen thousand volumes, and is perhaps the largest collection in the world devoted to the subject; a fund, given by Samuel C. Eastman, of the class of 1857, in memory of the founder of the collection, provides for its regular increase. The second is the Rider Collection of Rhode Island History, formed by Sidney S. Rider and presented to the University by Marsden J. Perry, a collection remarkable for the extent and rarity of its manuscript and printed material bearing on the history of the state. The third is the Wheaton Collection of International Law, given by William V. Kellen, of the class of 1872, in honor of Henry Wheaton, of the class of 1802. This collection, which already numbers sixteen hundred volumes, is being rapidly increased. The fourth is the George Earl Church Collection, the bequest of Colonel Church, consisting of thirty-five hundred volumes, many of them of great rarity, on the geography, history, and development of South America. The fifth is the Corthell Engineering Library, containing seven thousand volumes and pamphlets. This collection is particularly rich in works on river and harbor engineering. The sixth is the Chambers Dante Collection, containing eleven hundred volumes besides many rare pamphlets, given by Henry D. Sharpe, of the class of 1894.

The reading room contains the most important reference books, the books reserved by the departments for class use, and the latest numbers of the standard periodicals, American and foreign. On the floor of the stack which opens

off the reading room has been placed a special collection known as the STUDENTS' LIBRARY, which consists of some seventeen thousand volumes selected for the use of undergraduates. To this floor all students have free access. The other floors of the stack are open regularly to graduate students, and to undergraduates by special permission. On the top floor of the building is a large exhibition room, open to the public, in which are displayed books and paintings and other objects of artistic, bibliographic, or historic interest.

The library funds amount to $104,220.50. Of this sum ten thousand dollars constitutes the Gammell Fund for the purchase of books relating to the history of the United States; ten thousand dollars, the Olney Fund for the purchase of plants and botanical books; ten thousand dollars, the Diman Memorial Fund for the purchase of books on medieval and modern history; and ten thousand dollars, the Banigan Fund for the purchase of books on medieval and church history. The remainder includes several smaller special funds and the Library Fund proper.

The following persons are entitled to the use of the library without expense,—the members of the Corporation and Faculty; other college officers; graduates residing in the State of Rhode Island; donors to the funds of the University to the amount of five hundred dollars, residing in the state of Rhode Island; graduate and undergraduate students; and any other persons to whom the Corporation or the Library Committee may from time to time grant the privilege.

The library is open during term time from 9 a.m. to 11 p.m. on week days, and from 2 to 11 p.m. on Sundays; during vacations on week days, from 9 a.m. to 5 p.m.

## THE JOHN CARTER BROWN LIBRARY

GEORGE PARKER WINSHIP, A.M., *Librarian*

THE JOHN CARTER BROWN LIBRARY, with the building erected for its use, was given to the University by the trustees under the provisions of the will of John Nicholas Brown, of the class of 1885. This collection, well known for many years as the most valuable private library of Americana in existence, was begun by John Carter Brown, of the class of 1816, and after his death was greatly enlarged by his widow and by his sons, John Nicholas and Harold Brown. It now includes more than twenty thousand volumes relating to the history of North and South America during the colonial period. The larger part of the books, many of which are of great rarity and value, were printed before the year 1800, and contain the earliest published accounts of events connected with the discovery, exploration, and colonization of the Western Hemisphere. The books may be consulted by properly qualified students or investigators, upon application to the Librarian. In the main hall of the building are exhibited rare books, engravings, and manuscripts belonging to the collection. The library is open on week days, from 9 a.m. to 5 p.m.

## DEPARTMENT LIBRARIES

The Germanic Department Library comprises over seventy-five hundred carefully selected volumes. The nucleus was purchased in Germany by the late Professor Alonzo Williams in the name of the principal donor, the Hon. Hezekiah Conant. It has since been augmented through the yearly appropriation granted by the University, and by the generosity of Mr. Samuel Morris Conant of Pawtucket and other friends of the department, including German citizens of Providence. The library contains editions of all the important writers of German literature; a large collection of works on Germanic philology; the leading German literary and philological periodicals; many works upon German history, the history of German literature, and German law, art, paleography, and geography. It is especially rich in works of the Middle High German period, in Goethe and Schiller literature, and in literature of the nineteenth century. It possesses several hundred photographs of masterpieces of German painting and architecture, and characteristic views of German cities and landscape. There are many lantern-slides, engravings, and bronzes used to illustrate the subjects taught. The rooms, Sayles 6 and 7, are open from 9.20 a.m. to 12.30 p.m., and from 2 to 6 p.m.

The English Department Library comprises about three thousand volumes, of which more than twenty-seven hundred were from the private library of the late Hammond Lamont, Professor of Rhetoric in Brown University from 1895 to 1900. These were presented to the University in his memory, by the classes of 1899 and 1900. The collection is especially rich in works on the drama and in prose fiction of the eighteenth century. The library is contained in the rooms of the department, in the John Hay Library Building.

The Libraries of the Departments of Greek and Latin constitute the Albert Harkness Classical Seminary, named in honor of its founder, the late Professor Albert Harkness. It consists of fifteen hundred volumes, purchased with funds contributed by friends of the University interested in classical studies, and contains the most important collections of Greek and Roman authors, besides commentaries, reference books, and similar aids. The room, Sayles 8, is open from 9.20 a.m. to 10 p.m.

The Romance Department Library consists of a collection of a thousand volumes for the use of advanced students in the Romance languages. The room, Sayles 4, is open daily.

The Biblical Department Library consists of a reference collection of one thousand volumes, including a valuable collection of Semitic books presented by Mr. Jacob Shartenberg of Pawtucket. Through the gift of Mr. William Gammell important books for the use of advanced students have recently been added. A number of Semitic, Biblical, and general religious journals are kept on file. The room, Sayles 3, is open from 9.20 a.m. to 12 m., from 2 to 5 p.m.,

and from 7 to 9 p.m., except Wednesday and Saturday afternoons and Friday evenings.

The Biological Department Library is a collection of about two thousand two hundred volumes and fifteen hundred pamphlets, to which additions are constantly made. More than fifty current periodicals bearing upon the work of the department are regularly received. The rooms, in Rhode Island Hall, are open from 9.20 a.m. to 4 p.m.

The Educational Department Library contains over twelve hundred volumes, chiefly text-books of recent publication. It occupies the seminary room of the department, in the Administration Building, and is open to all students interested in education, and to teachers and friends of education in the city and state.

The Library of the Department of Economics comprises about fifteen thousand volumes and twenty thousand pamphlets, to which additions are constantly made, and receives regularly about one hundred and twenty-five periodicals and papers bearing upon the work of the department. The rooms are on the first floor of the old library building, and are open from 9 a.m. to 1.30 p.m.; from 2.30 to 5.30 p.m.; and from 7 to 10 p.m., except Saturdays. Saturdays the hours are from 9 a.m. to 1 p.m., and from 2 to 5 p.m.

The Botanical Department Library consists of about eight hundred bound volumes, several thousand pamphlets, and the more important current periodicals. These books have been selected from the large number in the main library as the ones most likely to be in demand by students working in the laboratory, and by visiting botanists working in the Herbarium. When not in use at the department, or on reserve at the department or the main library, any of these books may be borrowed in the usual manner by applying at the University Library. The rooms of the department are in Maxcy Hall.

The Library of the Department of Physics is provided with files of the *Fortschritte der Physik*, *Annalen der Physik*, *Philosophical Magazine*, *Journal le Physique*, *Radium*, *Beiblätter der Physik*, *Physical Review*, *Science Abstracts*, *Physikalische Zeitschrift*, *Nature*, and other magazines, together with a rich collection of the standard works and monographs in all departments of Physics and Electrical Engineering, and also the collected works of great authors, physical tables, etc. The room, in Wilson Hall, is open daily.

The Mathematical Department Library comprises nearly six hundred bound volumes of mathematical journals and over nine hundred other books. Special effort has been made to have the best books in all branches of Mathematics. The library has complete sets of the following journals: *Acta Mathematica*, *American Journal of Mathematics*, *Analyst*, *Annaes Scientificos da Academia Polytechnica do Porto*, *Annals of Mathematics*, *Bulletin of the American Mathe-*

*matical Society, Bulletin des Sciences Mathématiques, International Catalogue of Scientific Literature, A, Mathematics, Journal de Mathématiques pures et appliquées* (Liouville), *Journal für die reine und angewandte Mathematik* (Crelle), *Mathematical Monthly* (Runkle), *Mathematical Questions and Solutions from the Educational Times, Mathematische Annalen, Proceedings of the London Mathematical Society, Transactions of the American Mathematical Society.* In addition to the above, the current numbers are taken of *Annales Scientifiques de l'Ecole Normale Supérieure, Göttinger Nachrichten, Jahrbuch über die Fortschritte der Mathematik, Revue Semestrielle des Publications Mathématiques.* The library has also *Encyclopédie des Sciences Mathématiques, Répertoire Bibliographique des Sciences Mathématiques,* and a complete dictionary card catalogue of the mathematical works in all the libraries of the University. It is desired that the library shall be used freely by the students; applications should be made to the librarian, Professor H. P. Manning. The library room is Wilson 28.

The Libraries of the Departments of Civil Engineering, Mechanical Engineering, Mechanics and Mechanical Drawing are grouped together on the third floor of the Engineering Building. They form an excellent working library of about twenty-three hundred volumes, including complete sets of many periodicals. All the important engineering periodicals are regularly received.

The Geological Department Library consists of more than twenty-five hundred volumes of general reference works, government and state reports, charts and maps, and periodicals dealing with various lines of geographical and geological study. The library, Room L, Sayles Hall, is open from 8 a.m. to 10 p.m.

Other Department Libraries. There are several other special collections of books for seminary and advanced laboratory work. The most important of these belong to the departments of Astronomy, Chemistry, History, Philosophy, and Social and Political Science.

The Women's College Library and Reading Room occupy two rooms in Pembroke Hall. The library comprises over thirty-one hundred volumes of standard literature, chosen with special regard to the courses offered, thus forming for students of the Women's College a convenient and valuable adjunct to the University Library. An experienced librarian is in charge.

## OTHER PROVIDENCE LIBRARIES

There are also at the service of the students of the University the seven collections of books named below. These comprise, with the University Library, over half a million volumes, exclusive of pamphlets and manuscripts.

The Providence Public Library offers to all students of Brown University,

upon the same conditions as to other residents of the city, the use of its carefully chosen collection, which comprises more than one hundred and sixty-three thousand volumes. Among its special features may be mentioned the Harris Collection on Slavery and the Civil War; the St. Bride Collection of Books on Printing; the Educational Collections; the "Standard Library" of best literature; and the Reference Department. About eight hundred periodicals, serials, and annuals are currently received. Within the past year the valuable Foreign Department has occupied new quarters, the books in this room comprising about ten thousand volumes, and representing more than a dozen of the modern languages and literatures. The Information Desk may be consulted with respect to books relating to any of the departments of University study, and to prepare lists of references in connection with any of the special topics under consideration. The library is situated at the corner of Washington and Greene Streets. Its principal rooms are open regularly from 9 a.m. to 9 p.m.; on Sundays, Christmas, and July 4, from 2 to 9 p.m.

The Library of the Providence Athenaeum is a collection of general literature numbering seventy-eight thousand volumes. The reading room receives over two hundred papers and magazines, including New York, Boston, and Providence daily papers, and American, English, German, French, and Italian weeklies, magazines, and reviews. In bound sets of periodicals and in books on art this library is especially rich. Professors or teachers may become annual subscribers on the payment of four dollars in advance, and any student of Brown University may become a subscriber for three months on the payment of one dollar. All such subscribers have the right to take out books and use the rooms of the library in the same manner as shareholders, except that the rights of subscribers who pay less than at the regular rate of twelve dollars per annum are personal only and do not extend to the families of such subscribers. The Athenaeum is open on week days, from 9 a.m. to 9 p.m.

The Library of the Rhode Island Historical Society is situated on Waterman Street, next to the old University Library Building. The library of the society comprises thirty thousand bound volumes and fifty thousand unbound volumes and pamphlets. Through the courtesy of the society the collection is made accessible, free of charge, to members of the University. It offers special facilities for thorough research not only in all subjects relating to the history of Rhode Island, but also in genealogy, biography, general American history, early American travel, and the drama. The library is open on week days, from 9 a.m. to 5 p.m.

The Annmary Brown Memorial, situated on Brown Street south of the University grounds, was founded by General Rush C. Hawkins, of New York, in memory of his wife, Annmary Brown, of Providence, a granddaughter of Nicholas Brown, after whom the University was named. The building contains a collection—one of the most complete in the world—of books from

the first European presses. It contains also a notable collection of paintings by old masters and modern painters. The collection of books was made for the special purpose of showing the progress of printing with movable metal type through the first half century of its existence, from about 1450 to 1500. It includes two hundred and twenty-five books from one hundred and thirty of the two hundred and thirty-eight first presses set up in the cities, villages, and monasteries in Europe before the year 1501, and is fairly representative of countries. Among the books are many rare and interesting volumes. Incidentally there came into the collection many notable volumes adorned with woodcuts which show the earliest use of the woodcutter's art for book illustration.

The Library of the Rhode Island Medical Society now occupies its new building on Francis Street, opposite the State House. It comprises about twenty-five thousand volumes upon medical science, including anatomy, physiology, public hygiene, and other subjects the study of which is pursued in the University. There is also a good file of current medical periodicals. Upon application students can, without cost, enjoy the privileges here offered. The library is open on week days, from 9 a.m. to 5.30 p.m.

The State Law Library is a collection of forty thousand volumes. It is accessible to all students, and for certain lines of University study is invaluable. University students are requested to introduce themselves at the desk. The rooms of the library are in the Providence County Court House, at the corner of Benefit and College Streets, and are open on week days, from 9 a.m. to 5 p.m.; except on Saturdays, when they close at 3 p.m.

The State Library, located in the State House, contains a large collection of official documents of the United States and of the several states, a complete collection of the United States Patent Office Specifications, and general works pertaining to history and political science. The Legislative Reference Bureau conducted by the State Library directs the work of students who are investigating topics in comparative legislation. The library is open to the public on week days, from 9 a.m. to 5 p.m.; except on Saturdays, when it closes at 12 m.

## LABORATORIES

The Ladd Astronomical Observatory is equipped with a Saegmuller-Brashear equatorial of twelve inches aperture, which is supplied with a filar micrometer, a spectroscope, a photographic plate carrier, and other attachments; two equatorials, each of four inches aperture; four transit instruments, two of which can be used as zenith telescopes; a chronograph; three astronomical clocks; several sextants and chronometers; recording meteorological apparatus; and various minor instruments. The equipment is available for illus-

trating the general courses in astronomy and for practical use in the applied courses.

The Observatory furnishes constant time-signals to the Fire Department of the City of Providence, and to the Rhode Island Electric Protective Company, which distributes them to its patrons. Routine observations for determining clock errors, and for pressure, temperature, humidity, and precipitation, are made throughout the year. Special observations are also made as opportunity offers.

The Physical Laboratory is in Wilson Hall, which was specially designed and constructed for the Department of Physics. Twelve laboratory rooms are available for experimental study. Brick piers support the instruments requiring great steadiness, and the magnetic rooms are as free as possible from the influence of iron and from other disturbances. Several rooms on the ground floor are devoted to electrical engineering. The Laboratory is supplied with apparatus both experimental and demonstrative, and frequent additions are made. The department has a large collection of historical and other photographs, lantern-slides, and cage models illustrating the propositions in pure and applied physics.

The Chemical Laboratories are in Rogers Hall, which was erected expressly for the Department of Chemistry. The inorganic laboratory is supplied with tables and lockers furnishing accommodations for about two hundred and fifty students working by detachments. The organic laboratory is fitted with tables for about fifty students. Each table has arrangements for gas, high-pressure water-supply, etc.

The Geological Laboratories are in the basement of Sayles Hall. They are equipped with the requisite apparatus and with a detailed series of illustrative specimens for work in general geology, geography, and mineralogy. The region in which the University is situated offers in a small compass both simple and complex problems in field research in structural, paleontological, and stratigraphic geology.

The Biological Laboratories are in Rhode Island Hall. They include laboratories for physiology, bacteriology and histology, neurology and embryology, and a large laboratory for elementary anatomy and comparative anatomy. The collection of zoölogical and anatomical material is available for the work of the department. Abundant living material is readily obtained, since the laboratory is situated near the salt water.

The Botanical Laboratories are in the basement of Maxcy Hall. There is also a greenhouse for experimental work adjoining the building. The larger laboratory is used for the elementary courses, and the smaller for advanced work. They are equipped with the necessary simple and compound microscopes, paraffin baths, microtomes, freezing apparatus, incubator, sterilizer,

etc., and a considerable amount of plant material preserved in liquids, as well as dried. The Herbarium, in an adjoining room, is accessible to advanced students in forestry and medicinal and systematic botany.

The Psychological Laboratory occupies rooms in Wilson Hall. It possesses apparatus for the study of sensations, the determination of discriminative sensibility, the measurement of the duration of mental processes, the detection of physiological accompaniments of changes in consciousness, the study of temperament, and research in other fields. This equipment is adapted for the illustration and demonstration of the main results of experimental work in psychology, and for carrying on original research.

The Mechanical Engineering Laboratories and drafting rooms are situated in the Engineering Building. The laboratories are equipped with apparatus for the work of the courses in strength of materials, steam, gas, and hydraulic engineering, and metallography. They contain a 400,000-pound and a 50,000-pound Riehlé testing machine; a machine for testing full-sized timber and steel beams; a 50,000-inch-pound Olsen torsion testing machine; a machine for testing by repeated stresses; two Riehlé cement testing machines; a cross-compound condensing Corliss engine; steam turbine; various smaller engines, gas and gasoline engines, steam pumps, air compressors, injectors, and the necessary apparatus for testing them; a rotary fire pump, pulsometer, ram, Pelton wheel, turbine, Venturi meters, weirs, and measuring tanks; apparatus for investigating the nature and structure of alloys; a photographic dark room; and the usual small apparatus necessary to the work of such laboratories.

The Mechanical Engineering Shops, in Rogers Hall, are equipped with hand and machine tools for purposes of instruction in wood-working and metal-working.

The Mechanical Drawing Rooms, accommodating two hundred and fifty students, are on the top floor of the Engineering Building. A collection of about two hundred and twenty-five models in wood and metal is extensively used in the courses. There is a dark room, with apparatus for preparing blue-prints.

The Civil Engineering Drafting Rooms, instrument room, and offices are located on the second floor of the Engineering Building. The drafting rooms have desks for about one hundred students. The instrument room contains a complete equipment of apparatus necessary for the field work in surveying and railroad engineering. For the work in structural engineering the department has a collection of over four hundred photographs, five hundred large blue-prints of bridges, buildings, roof trusses, etc., and a complete set of steel structural shapes and iron beam-hangers. The department has also a collection of the various rocks used as road material, a Bausch and Lomb petrographic microscope, a set of the rail sections of the American Society of Civil Engineers, and models of railway appliances and harbor improvements.

## MUSEUMS

THE MUSEUMS OF ZOÖLOGY AND ANTHROPOLOGY are in Rhode Island Hall. They are not mere exhibition rooms, but places for work. The zoölogical and anatomical collections of the University form the Jenks Zoölogical Museum. The Museum of Anthropology contains a collection of articles of dress and implements from foreign countries, and a valuable collection of stone implements of aboriginal American races, including those of Rhode Island. The museums are open to the public daily.

THE HERBARIUM is in the basement of Maxcy Hall. The general collection contains upwards of seventy-five thousand specimens from all parts of the world, but mainly from America. The cryptogams occupy ten cases and the seed-plants thirty. All of these are mounted and systematically arranged according to Engler and Prantl's *Natürliche Pflanzenfamilien*. There are also several cases of unmounted specimens and duplicates. The genus *Carex* is particularly well represented, as it was the object of much special study by Colonel S. T. Olney, the founder of the Herbarium.

THE MUSEUM OF FINE ARTS occupies the first floor of Manning Hall. It contains plaster casts of unusual excellence, chiefly from works of classical sculpture, which are of great value in illustrating ancient history, biography, and art. It also contains some original specimens of Etruscan, Graeco-Roman, Early Christian, and Oriental sculpture; and the George W. Harris bequest of pictures by old masters of the Italian and North European schools, and of works in marble, china, glass, bronze, and silver. Certain works in silver and china, owned by the University through the George W. Harris bequest, are temporarily loaned to the Rhode Island School of Design, and are on exhibition at the museum of that school.

The University possesses a large collection of valuable portraits, which are hung in Sayles Memorial Hall. It now includes portraits of the University's principal benefactors, of many of its former officers, and of other distinguished persons, Americans and foreigners. The history of Rhode Island is especially well represented.

A large painting by Domenico Tintoretto, representing Moses Smiting the Rock, the gift of Mrs. Charles Bradley and the late George L. Bradley, Esq., is in the Museum of Fine Arts. Some paintings, selected from the collections of the University, are exhibited in the gallery on the top floor of the John Hay Library.

A series of fourteen oil paintings illustrating early American history, by Frank O. Small, presented to the Department of History by Samuel M. Conant, is hung in the Faculty Room in the Administration Building.

All the collections are open to the public.

# EXTENSION COURSES

THE University offers during each year two series of extension courses, given at the University and open to all who desire to enter. Each course consists of ten lectures or other exercises, and, while not identical with the corresponding course offered to regular students, is equivalent in the general character and amount of the work required. Persons entering these courses may at their option attend merely as listeners, or may do the prescribed work and take the examination given at the end of the course.

On the completion of each course, certificates are issued to those who have done the work assigned and passed the examination. Each extension course of ten lectures or other exercises is regarded by the University as the equivalent of one-third of a regular three-hour course for one semester, and is accepted by the University in fulfilment of the requirements for the degree of A.B., Ph.B., and A.M., subject to such regulations respecting entrance requirements and prescribed courses as govern regularly enrolled candidates for the respective degrees. Regularly enrolled undergraduates, however, are not given credit for extension courses. For the degree of A.M., credit for extension courses may not exceed in amount two-fifths of the requirement for the degree, and the candidate must be registered with the Dean of the Graduate Department. Those who wish a certificate or university credit should announce their intention at the time of registration; all such announcements must be made not later than the third lecture of the course.

Applications for admission to extension courses should be sent to Professor Walter Ballou Jacobs, Secretary of the Committee on Extension Courses, Administration Building, Brown University. The application should give the full name and the address of the applicant, the course or courses in which registration is desired, and, if the applicant is a teacher, the present educational position. On receipt of the fee, a card of admission is issued which must be shown at the first lecture in each course. Classes are not formed in any course for which fewer than twenty-five apply. The fee for each course is three dollars and a half, payable in advance. Students desiring a certificate or University credit pay an additional fee of one dollar and a half; this fee is due on registration and must be paid not later than the third lecture of the course. Checks should be made payable to Brown University. They should be sent with the application if possible; if not, payment may be made at the Registrar's office, Administration Building.

The courses offered during the first half of the year 1912–13 are:

*American History. Some Aspects of American Colonial Society. Professor* MacDonald.

*Astronomy. The Solar System. Professor* Upton.

*Education. The Learning Process. Professor* Colvin.

*Engineering. Materials of Construction. Professor* KENERSON.
*English. The Romantic Period in English Poetry. Professor* BENEDICT.
*French. France of To-day. Mr.* MICOLEAU.
*Political Science. World Politics. Professor* DUNNING.
*Romance Literature. Dante's Inferno. Professor* LANGDON.
*Business Management. Principles of Modern Business. Mr.* CHARLES C. BATCHELDER.

# ARRANGEMENTS WITH OTHER INSTITUTIONS

## THE RHODE ISLAND SCHOOL OF DESIGN

THE Rhode Island School of Design is an institution of large and increasing importance for the education of artisans and artists in the principles and processes of art, and for the general advancement of education in art by the exhibition of works of art and art studies, and by lectures. Its school buildings and museum are near the University grounds, and its collections are open daily to the public. Through its exhibitions there is opened to students an important means of culture.

The Corporation and Faculty of Brown University have agreed with the authorities of the Rhode Island School of Design upon a plan of coöperation in accordance with which certain courses at this School are open to students of the University and are counted towards a University degree. A description of these courses and a statement of the conditions under which they may be elected will be found in the list of studies given under the Department of Art, on pages 81, 82. Students from the Rhode Island School of Design are admitted to any classes in Brown University for which they are found to be prepared.

## THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

In 1902 a number of the friends of the University, in recognition of the sixtieth anniversary of the graduation of the late Professor Harkness, one of the founders of the American School of Classical Studies at Athens, united in contributing to the School the sum of $5555, to establish a fund to be known as "The Albert Harkness Fund for the Benefit of Brown University." By the establishment of this fund, the privilege of free tuition in the School is secured for all adequately prepared graduates of the University. Any who desire detailed information regarding the School may obtain it by applying to Professor Poland or Professor Manatt, members of the Managing Committee, or to Professor Allinson, who was Professor at the School in 1910–11.

## THE NEWTON THEOLOGICAL INSTITUTION

The Newton Theological Institution has entered into an agreement with Brown University whereby certain work done in the University, for which a mark of C has been awarded, or upon which the student passes an examination satisfactory to the Faculty of the Newton Theological Institution, will be credited toward graduation in the Theological course as follows: Biblical Literature and History 1, 2, 3, 4 (132 hours); 11, 12, 13, 14 (108 hours); 15, 16,

17, 18 (112 hours); English 7 (33 hours), — in all, 385 hours. The total number of prescribed hours in the Theological course at the Newton Theological Institution is 1485.

# THE TRAINING OF TEACHERS

## ARRANGEMENTS WITH THE STATE OF RHODE ISLAND

THE State of Rhode Island by act of the Legislature has entered into coöperation with Brown University for the professional instruction of college graduates who desire to become teachers in high schools, principals of high schools or elementary schools, or superintendents, or for those who already hold such positions. For this purpose the state appropriates annually $5000. A part of this sum is employed in maintaining graduate courses in education. Part is expended in maintaining scholarships covering full tuition for a year of graduate work for the degree of Master of Arts. Holders of these scholarships must make Education their major subject, and their courses must be approved by the Department of Education. Graduate scholarships for professional studies are also granted for less than a full year of work. Appointment to these scholarships is made by the State Board of Education. Candidates must conform to the requirements for graduate students regularly fixed by the University.

## ARRANGEMENTS WITH THE CITY OF PROVIDENCE

The School Committee of the City of Providence, by special agreement, appoints a number of student teachers in the Providence High Schools. Appointments are made from Graduates of Brown University or of other institutions of equal rank, who have pursued undergraduate courses in Education. These student-teachers are of two types. Those of the first type — of whom there are at least four, two of each sex — are occupied in the schools each day for somewhat more than half the usual school session. They receive a salary of four hundred dollars a year from the city. Those of the second type are allowed to teach and observe about five hours a week. They have considerably more freedom in the choice of subjects and of hours than those of the first type; they receive no remuneration from the city. An unusual opportunity is thus afforded students to gain at the same time a knowledge of the theory of education and experience in the art of teaching. In making appointments to places as regular teachers of the lowest grade in the Providence High Schools, preference is given to those who have successfully completed this course of training as student-teachers. In this respect student-teachers of the second type have the same status before the Committee as those of the first type. The practice-teaching

in the Providence High Schools is done under the following Supervising Teachers:

Charles E. Dennis, Ph.D., *Latin*
Harriet P. Fuller, A.M., *Latin*
M. Catherine Mahy, A.M., *English*
J. Madison Gathany, A.M., *History and Civics*
Agnes F. Williams, A.M., *French*
Russell C. Lowell, A.M., *Mathematics*
Clarence H. Manchester, A.M., *English*
Edith H. Williston, A.M., *German*
Richard O. Dummer, A.M., *Physics and Chemistry*
Alden E. Hodgkins, B.S., *Mathematics*
Harriet W. Blake, A.M., *English and History*

In a similar way a number of students are appointed to places in the Providence Grammar Schools. They receive a salary of three hundred dollars a year from the city. A limited number of Seniors and Graduates who are pursuing courses in Education are allowed to observe and teach in the Grammar Schools of the city in a way similar to that provided for student-teachers of the second type in the High Schools.

# PROVISIONS FOR THE PERSONAL WELFARE OF THE STUDENTS

## PHYSICAL TRAINING

FOR the physical training of the students excellent opportunities are offered by the Lyman Gymnasium. It is thoroughly equipped with baths, dressing rooms, bowling alleys, and all kinds of apparatus usually found in modern gymnasiums. Connected with the gymnasium is the Colgate Hoyt Swimming Pool, seventy-five feet in length by twenty-five feet in width, with a capacity of seventy-five thousand gallons. All the gymnasium work is under the supervision of the Professor of Physical Training, who makes a thorough examination and measurement of each student on entrance, and at other times by request. Special cases are referred to Dr. P. P. Chase, the University Physician. Such exercises are prescribed as may be necessary to give health, strength, and symmetrical development. No student is allowed to attempt any feat which is likely to result in injury. From the close of the Thanksgiving recess to the beginning of the spring recess, all first and second year students are required to attend gymnasium exercises three times a week. For other members of the University voluntary classes are provided. The instructor gives five-minute talks on personal hygiene and exercise. The class work consists of setting-up exercises, developing exercises, calisthenics, the use of clubs, dumb-bells, wands, and single sticks, and general athletics. Instruction is also given in swimming, a special effort being made to teach all students to swim. In all the work, the aim is to develop health, strength, and vitality.

All branches of athletics are under the management of the Brown University Athletic Association, and are controlled by a board of undergraduates. The Faculty Committee on Student Organizations has general oversight of the deportment and scholarship of the members of the various teams. Lincoln Field adjoins the gymnasium, and is a convenient place of exercise for the class teams and the students in general. Andrews Field, which is a mile and a half from the University, offers the usual opportunities for all the University teams. The Marston Field House, the gift of Mr. Edgar L. Marston, is fitted with dressing rooms, lockers, baths, and other accommodations.

## MEDICAL CARE

Any student suffering from illness is expected at once to visit or summon the University Physician, Dr. Peter P. Chase. [62 College Street. Office hours, 2 to 4 p.m.; 7 to 8 p.m. Telephone Angell 1012-W.] When called to see students at their rooms, the duty of the University Physician is to make one call for diagnosis and prescription at the expense of the University. For continued

attendance, students make their own arrangements with Dr. Chase or some other physician. All office calls are at the expense of students.

The University owns two free beds in the Rhode Island Hospital, to the occupancy of which the President of the University has the right of appointment. The first of these, THE CHARLES SMITH BRADLEY FREE BED, was established in 1872 by the payment to the hospital of four thousand dollars by the late Judge Bradley, a member of the Board of Fellows, thereby endowing a free bed "under the control of the President of Brown University for the time being, for the benefit of any officer or student of that institution who may have occasion for it." The second, THE GEORGE IDE CHACE FREE BED, was established by the payment to the hospital of four thousand dollars by the late Professor George Ide Chace; this foundation gives to the President of the University "the right to nominate and send to said hospital a patient, being a proper subject for treatment in said hospital according to the rules of the institution, to occupy a bed in said hospital, and to receive the usual care, and medical, surgical, and other attendance, and medicines and board, free of charge."

## STUDENT ADVISERS

As early as possible in the year the members of the Freshman class are divided into small groups, for each of which some member of the Faculty acts as special counselor. In making the assignments, the expressed preference of either student or adviser is followed whenever practicable. One meeting is usually definitely appointed; but the working of the system is entirely informal, and while it is desired that it shall lead to closer personal relations, it fulfils its chief aim if it permits each student to feel that in any emergency of his college life, great or small, he is free to claim the counsel of a mature and interested adviser.

## THE BROWN UNION

The chief aim of the Brown Union is to encourage a vigorous and healthy social life in the university, to bring undergraduates, Faculty, and Alumni into closer relation than would otherwise be possible, and to unite under one roof, with competent direction, the various activities of the students. Membership is open to students, Alumni, and Faculty, and includes almost all of the undergraduates. The Board of Management consists of the President of the Union, who must be a member of the Senior class, and four members appointed by the Corporation. The Union occupies Rockefeller Hall, which is also the headquarters of the Brown Christian Association. The building affords attractive offices for the Athletic Board, 'Varsity Teams, the musical and dramatic clubs, the *Brunonian*, the *Daily Herald*, and the College Bookstore, rooms of various sizes for student meetings, and the usual conveniences of a social club, including large and handsomely furnished rooms for reading and lounging, an auditorium with well-equipped stage, a restaurant and lunch-counter, billiard room

and barber shop. In coöperation with the Christian Association, the Brown Union holds a series of College Nights on Tuesday evenings throughout the year. The programs include readings, musical or dramatic entertainments, and addresses of various sorts. The Secretary and Treasurer, Arthur F. Newell, '12, gives his whole time to the affairs of the Union and the Christian Association.

### THE BROWN CHRISTIAN ASSOCIATION

The purpose of this Association is to unite all men who cherish Christian ideals in the service of their fellow men. It welcomes to membership all men who are connected with the University. Among its activities are frequent meetings for the discussion of religious, philanthropic, and educational problems and for devotional purposes; the arrangement of conferences with Vesper preachers; coöperation with the churches in religious and social work. It maintains an Information Bureau at the opening of the college year and an Employment Bureau (see page 181) throughout the year, which seeks to secure remunerative work for students who are dependent upon their own resources. The General Secretary, Arthur F. Newell, '12, gives his full time to the work of the Association and the Brown Union. His office is Room K, Rockefeller Hall. Other rooms in the same building are specially designated for the various activities of the Association.

### RELIGIOUS SERVICES

A chapel service is held in Sayles Hall every week day at 9 a.m. The President usually conducts the exercises. Attendance is required of undergraduates.

During the winter a series of vesper services is held in Sayles Hall on Wednesday afternoons at five o'clock, open both to students and to the public.

In 1911–12 the preachers at the vesper services were as follows:

Rev. Henry S. Coffin, *New York City.*
Rev. Charles R. Brown, *New Haven, Conn.*
Rev. Albert P. Fitch, *Cambridge, Mass.*
Rev. Harry E. Fosdick, *Montclair, N. J.*
Rev. Austen K. de Blois, *Boston, Mass.*
Rev. Alfred W. Wishart, *Grand Rapids, Mich.*
Rev. George Hodges, *Cambridge, Mass.*

## DORMITORY ACCOMMODATIONS

IN the University dormitories there are in all one hundred and thirty-two single rooms and thirty-four suites. The rooms in Hope College, University Hall, and Slater Hall are unfurnished. Those in Maxcy Hall and Caswell Hall contain all necessary furniture, occupants providing nothing except bedclothes

and towels. A table showing the rent and location of the dormitory rooms is printed in the Appendix. The prices there given include rent, heat, and service for the college year. Lighting is not included; there are meters for each room, and the occupants are charged for the amount of light used.

Each student renting a room must sign a contract therefor in the form given below, on which surety may be demanded, binding him to pay or cause to be paid the rent of the room through the entire year. Where two students rent a room together, each must sign a contract for half the room expenses. This obligation is not impaired by the student's removal from the University, whatever the cause of such removal.

*The following is a contract between Brown University, party of the first part, and the undersigned, party of the second part. I hereby engage room No. in ; the same not to be occupied by any other person without consent of the party of the first part; and I bind myself to pay or cause to be paid to the Registrar of Brown University the entire rent, including heat and service, amounting to $ for the college year beginning September, 191*

*It is a part of this agreement that I shall be held responsible for all damage or defacement of such room or its furniture, ordinary wear excepted; also that disuse of the room by me on account of illness, or in case registration is refused me owing to low standing or bad conduct, does not impair the obligation of this contract.*

*Signed*_____

*This day of 191 .*

Not more than two students are allowed regularly to occupy a room or suite. No sub-letting of rooms will be allowed. When the University holds full contracts for a room, the tenant or tenants may admit to the use of the room in the daytime one or two students, but not more than two. The names of any such sub-tenants must be reported to the Registrar as soon as the arrangement for sub-tenancy is made. For each sub-tenant the University makes an extra charge of $1.50 a semester for service. This sum is paid by the tenant-in-chief, if there is but one; if there are two, each pays half.

All rooms not assigned for 1913–14 before May 9, 1913, will be disposed of at a drawing on May 24 at 4.30 p.m. Men intending to enter college in September can arrange to be represented at the drawing by notifying the Registrar.

## UNIVERSITY FEES

FEES FOR UNDERGRADUATES. *Tuition:* $52.50 a semester; $105 a year. *Incidentals:* $24 a semester; $48 a year. *Matriculation fee* (Freshman year only): $5. *Graduation fee* (Senior year only): $8.

The incidental expenses are for the printing of programs, examination papers, and the like, the use of the library and the gymnasium, heat for these buildings and for the recitation rooms, and the wages of servants to care for them.

Special students who are taking courses amounting to less than fifteen hours a week pay in proportion to the actual amount taken.

FEES FOR RESIDENT GRADUATE STUDENTS. *Tuition:* $75 a semester; $150 a year. *Graduation fee:* for the degree of Master of Arts, $15; for the degree of Master of Science, $15; for the degree of Doctor of Philosophy, $25.

Graduate students who are taking courses amounting to less than fifteen hours a week pay $15 a semester for each three-hour course.

A candidate in residence for the degree of Master of Arts or Master of Science who has paid full tuition for one year may, if necessary to the attainment of his degree, continue his studies for one year more without additional charge.

A candidate in residence for the degree of Master of Arts, who without remitting his studies becomes a candidate for the degree of Doctor of Philosophy, is credited with whatever tuition he has already paid, in case his previous work is allowed to count toward the higher degree.

A candidate for the degree of Doctor of Philosophy who has paid full tuition for two years may, if necessary to the attainment of his degree, continue his studies for two years more without additional charge.

FEES FOR NON-RESIDENT GRADUATE STUDENTS. *Registration fee:* $25. *Tuition:* $15 a semester; $30 a year. *Examination fee:* $15.

A non-resident candidate is entitled, upon payment of the registration and tuition fees, to take one three-hour course in residence. For each additional course taken in residence a fee of $15 a semester is charged.

A non-resident candidate who has paid tuition for two years may, if necessary to the attainment of his degree, continue his studies for one year more without additional charge, except for work taken at the University.

LABORATORY FEES. In addition to the regular fees mentioned above, the following fees are charged for laboratory courses. $4.50 for each three-hour semester course in *Botany, Biology, Geology, Elementary Chemistry.* $7.50 for each three-hour semester course in *Advanced Chemistry, Mechanical Engineering, Physics, Electrical Engineering.* These fees cover the cost of ordinary supplies; special supplies and breakage are charged extra.

SPECIAL FEES. Candidates for a first degree who do not pay four years full tuition fees must pay for all extra courses counted toward the degree at the rate of $7.50 per semester for each three-hour course. This amount must be paid at the beginning of the semester preceding the completion of the

degree work. This rule does not apply to courses credited from other institutions or taken during the summer.

Candidates for the degree of A.M. or Sc.M. who do not pay full tuition fees for one year, and candidates for the degree of Ph.D. who do not pay full tuition fees for two years, must pay for all extra courses counted toward the degree at the rate of $7.50 per semester for each three-hour course. This amount must be paid at the beginning of the semester preceding the completion of the degree work. This rule does not apply to courses credited from other institutions.

## PAYMENT OF UNIVERSITY BILLS

Every student, graduate or undergraduate, must pay in advance, at registration for each semester, all charges for tuition and incidentals for such semester.

Students occupying dormitory rooms must also pay at the above time all room charges for the semester.

Students taking laboratory courses must also pay at the above time all laboratory fees for the semester. These fees vary from $4.50 to $7.50 for each three-hour laboratory course.

At the beginning of the second semester all students occupying dormitory rooms or taking laboratory courses must, in addition to the payment of the above amounts, make a deposit of $5 toward charges for light or breakage during that semester.

Freshmen, candidates for degrees, must pay at registration for the first semester a matriculation fee of $5.

Candidates for graduation in any year must pay all graduation fees at the beginning of the second semester of that year.

## ESTIMATE OF ANNUAL EXPENSES

The following is an approximate estimate of the annual expenses of a student who occupies (with a room-mate) a dormitory room. It does not include the matriculation fee of $5 in the first year, the graduation fee of $8 in the fourth year, nor outlay for clothes and traveling or other strictly personal expenses.

| | *Moderate* | *Liberal* |
|---|---|---|
| *Tuition* | $105.00 | $105.00 |
| *Incidentals* | 48.00 | 48.00 |
| *Room rent, including heat and service* | 60.00 | 187.50 |
| *Board* (40 weeks) | 180.00 | 240.00 |
| *Books and laboratory expenses* | 30.00 | 75.00 |
| *Total* | $423.00 | $655.50 |

The Brown Union conducts a restaurant for its members in Rockefeller Hall; at present the price is $5 a week.

Students who need to earn money find in the city numerous opportunities for doing so by giving private instruction, by teaching in evening schools, and in various other ways. See page 181.

# FINANCIAL AID TO STUDENTS

THE aid which Brown University gives to students of limited means is granted under the following conditions: the recipient must be a candidate for a degree, having been fully admitted to the Freshman class or to advanced standing; he must be of good moral character and maintain a creditable standing in his studies: an average of C is expected; the aid will be withdrawn if the student is placed under college discipline or fails to maintain good scholarship; he must be in need of the financial assistance desired. The aid rendered is of three kinds: awards from fellowship, scholarship, and aid funds; loans; payment in cash or in credit on term bills for services rendered.

The administration of the scholarship and aid funds is in the hands of a committee of the Faculty, annually appointed by the Corporation. Applications for scholarships for a given academic year should be filed with the Secretary of the Committee on Scholarships as early as possible after April 1. The committee will take action in each case as soon as all the requisite information is received. The President has charge of the administration of fellowships, loan funds, and the service system.

## FELLOWSHIP, SCHOLARSHIP, AND AID FUNDS

THE GRAND ARMY OF THE REPUBLIC FELLOWSHIP. The income of a fund of ten thousand dollars given by the Grand Army of the Republic, Department of Rhode Island, is annually awarded to a graduate of Brown University, of acknowledged excellence in scholarship and character. The recipient must be enrolled as a candidate for the degree of Doctor of Philosophy or have obtained that degree, must reside at Brown University, and must devote himself exclusively to advanced liberal study. Holders of the fellowship are appointed by the President of the University, subject to the approval of the Board of Fellows. Appointments to the fellowship are regularly made for one year, but incumbents of special diligence or ability may be reappointed. Descendants of Union Veterans of the Civil War are always to be preferred when the other qualifications of candidates are equal. The political or religious preferences of candidates cannot be taken into consideration. The President is authorized to make such other conditions, not inconsistent with the above, as he may from time to time deem wise and proper. Applications for this fellowship must be made in writing on blanks furnished by the Dean of the Graduate Department, and must be in the

hands of the President not later than April 15. The Grand Army of the Republic Fellow for 1912–13 is

HARRIS MERRILL BARBOUR

TEACHING FELLOWSHIPS. In addition to the foregoing a number of Teaching Fellowships have been established, information regarding which will be furnished by the President.

FUNDED SCHOLARSHIPS. There are now seventy-seven scholarships of one thousand dollars, each yielding the beneficiary fifty dollars annually. With the exceptions indicated below, they bear the names of their founders. The income is awarded annually according to the conditions attaching to each fund.

THE ELEVEN NICHOLAS BROWN SCHOLARSHIPS

THE FOUR UNIVERSITY SCHOLARSHIPS

THE PRESIDENT'S SCHOLARSHIP, founded by President Sears.

THE SIX ALVAH WOODS SCHOLARSHIPS

THE JAMES H. DUNCAN SCHOLARSHIP

THE ISAAC DAVIS SCHOLARSHIP

THE ARNOLD WHIPPLE SCHOLARSHIP, founded by Mrs. Arnold Whipple.

THE EPHRAIM WHEATON SCHOLARSHIP, founded by James Wheaton.

THE JOSEPH BROWN SCHOLARSHIP, founded by Mrs. E. B. Rogers.

THE GARDNER COLBY SCHOLARSHIP

THE CROCKER SCHOLARSHIP, founded by Robert H. Ives and Thomas P. Ives, Trustees.

THE CLARK SCHOLARSHIP, also founded by the Messrs. Ives.

THE GEORGE K. AND H. A. PEVEAR SCHOLARSHIP

THE JOSEPH CHARLES HARTSHORN SCHOLARSHIP

THE ROGERS HIGH SCHOOL SCHOLARSHIP, founded by William Sanford Rogers.

THE JAMES WHEATON SCHOLARSHIP

THE CHARLES THURBER SCHOLARSHIP

THE PARDON MILLER SCHOLARSHIP, founded by Mrs. Ann E. Miller.

THE HEZEKIAH S. CHASE SCHOLARSHIP

THE WILLIAM BUCKNELL SCHOLARSHIP

THE AUSTIN MERRICK SCHOLARSHIP, founded by Mrs. Olive E. Merrick.

THE HORATIO N. SLATER SCHOLARSHIP

THE EARL P. MASON SCHOLARSHIP

THE NEWPORT SCHOLARSHIP, founded by William Sanford Rogers.

The Alexis Caswell Scholarship

The Three Henry Jackson Scholarships

The Mumford Scholarship, founded by Mrs. Louisa D. Mumford.

The Albert Day Scholarship

The Henry P. Kent Scholarship

The Romeo Elton Scholarship

The Five Annie E. Waters Scholarships

The Lewis Fairbrother Scholarship, founded by Mrs. Lewis Fairbrother.

The George Lawton Scholarship

The John P. Crozer Scholarship, founded by Mrs. Margaret Bucknell.

The James Y. Smith Scholarship

The Two S. S. Bradford Scholarships

The Francis R. Arnold Scholarship

The Cornelia E. Green Scholarship

The Two Henry Clifford Knight Scholarships, founded by Miss Amelia S. Knight, in memory of her brother, a member of the class of 1875.

The Thurston Scholarship, founded by the Honorable Benjamin F. Thurston, of the class of 1849.

The Rufus Babcock Scholarship, founded by Mrs. Caroline Vassar Babcock Jones, in memory of her father, the Rev. Rufus Babcock, of the class of 1821.

The James Fletcher Blackinton Scholarship, founded by Mrs. Mary D. Blackinton, in honor of her husband, James Fletcher Blackinton, of the class of 1847.

The Samuel White Duncan Scholarship, founded by Mrs. Mary Duncan Harris.

The Five William A. White Scholarships, founded by Mrs. Abby S. A. White, in honor of her husband, William A. White, of the class of 1857.

The Richards Scholarship, founded by the Rev. William Coolidge Richards, of the class of 1837.

The Benjamin Hutchinson Judah Scholarship

The S. Dryden Phelps Scholarship, founded by the Rev. S. Dryden Phelps, of the class of 1844, the income to be given each year to some student who is preparing for the Baptist ministry.

The Eliot Loomis Collins Scholarship, founded by Clarkson A. Collins in memory of his son, Eliot Loomis Collins, of the class of 1910, "the income to be given each year to some member of the Junior class needing pecuniary aid, who may possess his characteristic qualities of earnestness of application, steadfastness of character, and cheerful personality."

The E. Benjamin Andrews Scholarship of one thousand dollars, founded by the class of 1898.

*There are also the following scholarships of larger amounts:*

The Two George J. Sherman Scholarships, paid from the income of a fund of two thousand five hundred and sixty-five dollars.

The Bartlett Scholarship of four thousand dollars, founded by Mrs. Elizabeth Slater Bartlett; the income to be "devoted to the support of one or more students needing pecuniary aid, and giving promise, by studious aim and by character and scholarship, of rising to distinction and usefulness."

The Glover Scholarship of five thousand dollars, founded by Henry R. Glover, "in memory of his father, Samuel Glover, of the class of 1808, and of his brother, Samuel Glover, Jr., of the class of 1839."

The Rebecca A. Wheeler Scholarship of fifteen hundred and seventy-one dollars; the income to assist some worthy student, preferably a candidate for the Baptist ministry.

The Scholarship of the Class of 1838 of thirty-eight hundred dollars.

The Joseph Charles Hartshorn Scholarship of two thousand dollars.

The Two Banigan Scholarships of three thousand dollars each, founded by Joseph Banigan, of Providence; the income as far as necessary to be used each year to defray the tuition of two students of the University.

The George Ide Chace Scholarship of five thousand dollars, founded by Professor George Ide Chace, the income to be assigned each year by the Faculty to some member of the Senior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Senior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

The Abby Wheaton Chace Scholarship of four thousand dollars, also founded by Professor George Ide Chace, the income to be assigned yearly by the Faculty to some member of the Junior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Junior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

The John L. Lincoln Scholarship of twenty-five hundred dollars, founded by Abby G. Beckwith.

The Truman Beckwith Scholarship of twenty-five hundred dollars, founded by Abby G. Beckwith.

The Thayer Scholarship, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815; the income to be for the education of any young man or woman a resident of Uxbridge, Massachusetts, indorsed by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

The Two Walter G. Webster Scholarships, founded by the Rev. Walter G. Webster, of the class of 1878; the income to go each year to two young men, members of the Freshman class, holding the full diploma of the Classical High School of the City of Providence and duly matriculated for the degree of Bachelor of Arts; "the nomination to rest with the Principal of said school, and to be made on the basis of character and scholarship, due regard being had to the need of such assistance."

The S. W. Marston Scholarship, founded in the name of his father by Edgar L. Marston. This scholarship yields two hundred dollars a year, and is open to any graduate of William Jewell College who may be recommended by the President of that institution.

The Three E. L. Marston Scholarships, founded by Edgar L. Marston. Each of these scholarships yields two hundred dollars a year. The first scholarship is open to any graduate of La Grange College who may be recommended by the President of that institution. The second is open to any graduate of Baylor University under similar conditions. The third is open to any graduate of the Central High School in St. Louis, Missouri, subject to the recommendation of the Principal.

The Eaton Scholarship of two thousand dollars, founded in memory of her husband by Mrs. Caroline B. Eaton; the income to be used "in the aid of indigent Baptist young men having the ministry in view, preference being given to young men from New Hampshire."

The Alexander Farnum Scholarship of two thousand dollars, founded by Rev. Augustus Woodbury; the income to be given to such student as the Faculty shall select, the primary condition being that such student shall have been prepared for college at Phillips Exeter Academy in Exeter, New Hampshire.

The Albert Harkness Scholarship of three thousand dollars, founded by Professor Albert Harkness; the income to be paid annually under the direction of the Faculty to some student of excellent character and high scholarship who shall be in need of pecuniary aid.

A Friend's Scholarship of five thousand dollars, founded by a friend of the University, the income to be awarded annually to some student in need of aid.

The Ellen Read Newell Scholarship of three thousand dollars, founded by George W. Newell in memory of his wife; "the income to be expended

(1) in behalf of some worthy graduate of the Pawtucket High School who may need financial help, (2) to such other meritorious student as the President or Faculty may designate."

THE FRED HOMER WILLIAMS SCHOLARSHIP of fifteen hundred dollars; the income to be awarded to some needy and worthy young man, preference being given to a graduate of the High School in Foxborough, Massachusetts.

THE GEORGE WOODLEY HOGG SCHOLARSHIP of five thousand dollars, in memory of George Woodley Hogg of the class of 1894, the income to be awarded annually to either one or two students at the discretion of the Scholarship Committee, preferably, though not necessarily, to students residing in the State of Rhode Island.

AID FUNDS. There are seven aid funds at the disposal of the University. The income of these funds is divided into scholarships of varying amounts, which are awarded under the general conditions applicable to all scholarships. They are as follows:

THE AARON LUCIUS ORDWAY MEMORIAL FUND of twenty-five hundred dollars, founded by Samuel H. Ordway in the name of his father, "the income to be used in the discretion of the President to assist regular students of the University who are in need of assistance. Each student who accepts such assistance shall in writing acknowledge the receipt of the same and pledge himself to repay the amount so received by him as soon as he can conveniently afford to do so, all sums so repaid to be added to the principal."

THE NANCY GOODNOW FUND of two thousand dollars, the income to be expended in assisting one or more students of the University who are preparing to be ministers of the Baptist denomination in the United States.

THE AID FUND, established by friends of the University in 1868 and now amounting to ninety-three hundred dollars.

THE DANIEL WANTON LYMAN FUND FOR STUDENTS, established by Daniel Wanton Lyman and now amounting to $72,250.

THE WILLIAM GROSBECK GODDARD MEMORIAL FUND of thirty-five hundred dollars, founded by Col. Robert H. I. Goddard in the name of his son, "the income to be used by the President or acting President of the University, in his discretion, to aid young men without adequate means to obtain an education. Each beneficiary shall give a receipt for all money received, and shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently."

THE EDWIN A. W. HARLOW FUND, founded by Edwin A. W. Harlow, now amounting to $10,400, the income to be "for assisting poor young men of excellent moral character in the Academic Department."

THE BENJAMIN BRAMAN FUND of one thousand dollars, the income to be granted annually to some worthy Christian student of limited means.

UNIVERSITY SCHOLARSHIPS. In addition to the income of the Scholarship and Aid Funds, there have been established University scholarships, which are of three grades:

(1) A small number yielding each $75 a semester or $150 a year, awarded to a few Juniors and Seniors of especially high scholarship.

(2) A number yielding each $50 a semester or $100 a year.

(3) A number yielding each $25 a semester or $50 a year, used in part to supplement the smaller endowed scholarships, and also for those students needing relatively less assistance.

It is expected that the holders of these scholarships will regard them as in a certain sense loans, and will at some time after graduation return to the treasury the amount awarded, to be used for the increase of the permanent scholarship funds, or that they will in some other way contribute to the endowment of the University.

## [B] LOAN FUNDS

I. The Alumni Loan Fund, now amounting to about forty-three hundred dollars, was established by the Alumni Association at the Commencement of 1900 by a vote transferring to the Treasurer of the University the fund formerly known as the Brown Loyalty Fund, to be used as a loan fund for students. The principal of this fund is loaned at interest, to be repaid as agreed upon in each instance.

II. There is another fund, of several hundred dollars, which is loaned in small amounts without interest, for short periods, to students unexpectedly needing temporary assistance.

## [C] SERVICE

The University is able to give employment to a number of students as monitors, assistants in the libraries and laboratories, members of the choir, and clerks in the Registrar's office. Not more than two hours a day are ordinarily required of any student; the compensation is made at definite rates. At present about six thousand dollars a year is appropriated for service, and employment is given to about eighty students, who receive amounts varying from thirty dollars to sixty dollars a semester.

The University also coöperates with the Christian Association in securing employment for students by business houses and residents of the city. Students who desire any kind of work are requested to make application to the General Secretary of the Brown University Christian Association, Rockefeller Hall.

# PREMIUMS, PRIZES, AND HONORS‡

## FOR EXCELLENCE IN PREPARATORY STUDIES

THE PRESIDENT'S PREMIUMS, derived from the income of a fund presented to the University in 1843 by President Wayland, supplemented from the income of the Hicks Prize Fund, No. 2, are awarded each year to those members of the Freshman class who upon examination are found to excel in the studies required for admission to the University in Greek and Latin. First and Second Premiums are awarded in each of these studies. The examinations deal with the general principles and laws of the languages involved rather than with irregularities and exceptions. Special importance is attached to the pupil's familiarity with the subject-matter of the works read, and to his ability to translate with accuracy and facility into clear, appropriate, and idiomatic English. The examination in Greek is held in 5 Maxcy Hall at 2.30 p.m. on the second Saturday of the first semester, and that in Latin in 1 Sayles Hall at 2.30 p.m. on the third Wednesday. The award of these premiums in 1912 was as follows:

*In* Greek *the first premium to* GEORGE JOSEPH ALOYSIUS CAIRNS, *instructed in the Classical High School, Providence.*

*The second premium to* CLAUS EMANUEL EKSTROM, *instructed in the Classical High School, Providence.*

*In* Latin *the first premium to* GEORGE JOSEPH ALOYSIUS CAIRNS, *instructed in the Classical High School, Providence.*

*The second premium to* CLAUS EMANUEL EKSTROM, *instructed in the Classical High School, Providence.*

THE HARTSHORN PREMIUMS IN MATHEMATICS, derived from the income of a fund of one thousand dollars presented to the University in 1872 by Joseph Charles Hartshorn, of the class of 1841, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the mathematical studies required for admission to the University. The examination is held in 27 Wilson Hall at 2 p.m. on the third Saturday of the first semester. The award of these premiums in 1912 was as follows:

*The first premium to* HOWARD SEIBERT BUTTERWECK, *instructed in Perkiomen Seminary, Pennsburg, Pennsylvania.*

*The second premium to* GUSTAVE DESIRÉ HOUTMANN, *instructed in Monnoir College, St. Johns, P. Q.*

‡ The premiums and prizes enumerated here are, with the exception of the *Society of Colonial Dames Prize in American History* (see page 186), intended for men. The students of the Women's College are, however, entitled to compete in all examinations for premiums and prizes offered in Brown University. In case any woman is entitled to a first premium, one is awarded her by the Dean of the Women's College. For premiums awarded to women in 1912 see pages 241, 242.

THE ENTRANCE PREMIUMS IN FRENCH, derived from the income of the Hicks Prize Fund, No. 2, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the French studies required for admission to the University. The examination is held in 1 Sayles Hall at 2 p.m. on the fourth Wednesday of the first semester. The award of these premiums in 1912 was as follows:

*The first premium to* GUSTAVE DESIRÉ HOUTMANN, *instructed in Monnoir College, St. Johns, P. Q.*

*The second premium to* EARL FRANKLIN WOOD, *instructed in the Killingly High School, Danielson, Connecticut.*

THE ENTRANCE PREMIUMS IN GERMAN, derived in part from the income of the Hicks Prize Fund, No. 2, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the German studies required for admission to the University. The examination is held in 5 Sayles Hall on the fourth Saturday of the first semester. In 1912 these were the CAESAR MISCH PRIZES, and were awarded as follows:

*The first prize to* ERNEST HALLIWELL, *instructed in the B. M. C. Durfee High School, Fall River, Mass.*

*The second prize to* JOHN JOSEPH CASHMAN, *instructed in the Hope Street High School, Providence.*

## FOR EXCELLENCE IN UNIVERSITY STUDIES

THE CARPENTER PRIZES FOR ELOCUTION, derived from the income of a fund established in 1867 by Thomas Carpenter, are awarded each year to the three students to whom are assigned the first, the second, and the third rank of excellence in elocution. The competition is open to all members of the Sophomore class, and to those members of the Junior class who did not enter the preliminary competition in their Sophomore year. The selections declaimed may be either prose or verse. They must be approved by the Professor of Public Speaking, with whom competitors must enter their names not later than the first day of February. A preliminary contest for the purpose of selecting the speakers takes place in the early part of the first semester; all arrangements for it are in the hands of the Professor of Public Speaking. The committee of award consists of five members,—the Professor of Public Speaking, who is the chairman, two persons selected by the Corporation, and two persons selected by the Sophomore class during the first semester of the year; no one who is or has been a member of the class is eligible to membership in the committee. In 1913 the contest will be held in Manning Hall on April 29. In 1912 these prizes were awarded as follows:

*The first prize to* Ira Lloyd Letts
*The second prize to* Benjamin Murrie McLyman
*The third prize to* Earle Raymond Delano

The Hicks Prizes for Excellence in Debate, established by the Honorable Ratcliffe Hicks, of the class of 1864, are annually awarded as follows:

I. Two prizes of fifty dollars each, one in each of the two series of contests for the selection of the representatives of the University in the intercollegiate debates. In each instance the prize is given to the man showing the greatest ability both in the preliminary trials and in the final trial. In awarding the prize, regard is given to thought, style, and delivery. The judges are three, appointed by the Debating Union. In 1912 these prizes were awarded to

Preston Hart Hood *and* Ira Lloyd Letts

II. A first prize of thirty dollars and two second prizes of twenty dollars to the students showing the greatest ability in a public debate between the representatives of the Junior and Sophomore classes. Each class is represented by three men, whom a committee appointed by the President of the University chooses from the preliminary contestants at least a month before the public debate. This committee also determines the subject and makes the necessary arrangements. The judges in the public debate are three, one appointed by the President, and one by each group of competitors. The prizes are awarded irrespective of the decision upon the debate as a whole. Any one prize may be withheld if no one is adjudged to deserve it. In making the award, regard is given to thought, style, and delivery. In 1913 the public debate will be held on May 13. In 1912 these prizes were awarded as follows:

*The first prize to* John Kent Starkweather
*The second prizes to* James Joseph McGovern *and* Walter Hoff Sprague

The Dunn Premium. The income of a fund of one thousand dollars, presented to the University in 1872 by pupils and friends of Professor Robinson Potter Dunn, is given, at the end of the Junior year, to the student having the highest standing in the courses in rhetoric, English composition, and public speaking. In making the award, regard is given to the number of such courses taken as well as to the rank attained in them. In 1912 this premium was awarded to

George Boas

The Carpenter Premiums, two in number, are derived from the income of funds established in 1867, one by Thomas Carpenter and one by Lydia Carpenter. They are assigned at the end of the Senior year to the two members of the Senior class who, "already on scholarships, shall, in the judgment of the Faculty, unite in the highest degree the three most important elements

of success in life,—ability, character, and attainment." In 1912 these premiums were awarded to

ARTHUR FRANCIS BUDDINGTON *and* JOHN HENRY WILLIAMS

THE HOWELL PREMIUM. The income of a fund amounting to one thousand dollars, presented to the University in 1867 by Gamaliel Lyman Dwight, is given at the close of the first semester of the Senior year to the student who, "having a good record of deportment, has the highest rank in Mathematics and Natural Philosophy." To be considered a candidate for the premium, a student must, in each semester from the Freshman year to the end of the first semester in the Senior year, take at least one of the elective courses in pure or applied mathematics. In 1912 this premium was awarded to

HOWARD CARLTON WHITE

THE CLASS OF 1873 PRIZE. The income of a fund of one thousand dollars, presented to the University by the class of 1873, is awarded each year to that member of the Senior class who writes the best essay on a historical or a philosophical subject. The subjects, which are of a historical nature one year and of a philosophical nature the next, are assigned by the respective departments. For 1912–13 the subject is: *The Origin, Nature, and Meaning of Religious Experience.* For 1911–12 the subject was: *The Regeneration of Prussia prior to the War of Liberation.* No prize was awarded.

THE FOSTER PREMIUM IN GREEK is derived from the income of a fund of three thousand dollars bequeathed to the University in 1880 by the Honorable Lafayette Sabine Foster, of the class of 1828. In accordance with the terms of the donor's will, the income of this fund is to be "annually paid to that scholar of the institution who passes the best examination in the Greek language, the examination to be made in the first, third, and twenty-fourth books of Homer's *Iliad*, or in the *Oration on the Crown* by Demosthenes." The examinations are open to the members of the Senior class. The next examination will be held early in May, 1913; candidates will be examined in the *Iliad*. In 1912 the premium was awarded to

CHARLES AMBROSE MALLOY

THE LUCIUS LYON PREMIUMS IN LATIN are derived from the income of a fund of five thousand dollars presented to the University in 1893 by Mrs. Caroline L. Lyon, in memory of her husband, Lucius Lyon, of the class of 1844. Five-tenths of the income each year forms the first premium, three-tenths the second, and two-tenths the third. Any part of the income not needed in any given year must be added to the fund. The premiums are awarded on the basis of a special examination held during the second semester of the Senior year. The examination may relate to any or all of the following subjects: the Latin language, Roman literature, Roman history. The President

of the University and the head of the Department of Roman Literature and History prescribe the conditions for admission to the examination. In 1912 the premiums were awarded as follows:

*The first premium to* Charles Ambrose Malloy
*The second premiun to* Wilbur Bertram Purvis

The Bennett Prize. The income of a fund of four hundred dollars, established by Philo S. Bennett in 1905, will be awarded annually for an essay on Free Government. The conditions governing the competition will be announced later.

The Class of 1880 Prizes, established in 1905 by the class of 1880, are awarded each year to the undergraduates of Brown University who show the most ability in presenting arguments on some current question of importance to Brown University. The subject for discussion, the time, and the manner of presentation are all determined by representatives of the English department in consultation with the president of the Debating Union and the editors-in-chief of the *Brunonian* and the *Brown Daily Herald*. The prizes are awarded by a board of five judges: two are appointed by the President of the University, two by the undergraduate members of the committee in charge; the fifth is a member of the English department.

In 1912–13 a first prize of thirty-five dollars and a second prize of twenty-five dollars will be awarded to the students who show the most ability in a public discussion of the subject: *How should the system of "rushing" students for fraternities at Brown be improved.* This discussion will be held on December 11; a preliminary discussion will be held on December 4. A first prize of twenty-five dollars and a second prize of fifteen dollars will be awarded to the writers of the best argumentative essays of from three thousand to five thousand words upon the same subject. The essays must be signed with an assumed name; they must be in the hands of the Registrar before 4 p.m., December 6. Either prize for the essay may be withheld if the judges deem it best. A student may enter both competitions. For 1911–12 the subject was: *Resolved: that the ownership of all Brown undergraduate publications should be vested in the student body, and that no member of a managing board should receive compensation for his labors.* The prizes were awarded as follows:

*The first prize for the discussion to* John Kent Starkweather
*The second prize for the discussion to* Daniel Gerald Donovan
*The first prize for the essay to* John Kent Starkweather
*The second prize for the essay to* William Anthony Moffett

The Society of Colonial Dames Prize in American History. The income of a fund of fifteen hundred dollars, known as The Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906,

is awarded each year as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Detailed regulations governing the competition are announced from year to year, and the name of the successful competitor is announced at Commencement. The subject for the essay in 1912–13 is: *The History of Paper Money Controversies in Rhode Island.* For 1911–12 the subject was: *Rhode Island Trade and Commerce during the American Revolution.* The prize was awarded to

WILLIAM HOVEY DINKINS

THE BISHOP MCVICKAR PRIZES were founded by the late Rt. Rev. William N. McVickar, Bishop of the Protestant Episcopal Diocese of Rhode Island, and are continued by his sister, Miss E. C. McVickar. A first prize of fifty dollars, and a second prize of twenty-five dollars, is awarded for the best essays of from three to four thousand words on a subject assigned by the Department of Biblical Literature. The competition is open to undergraduate men who are, or have been, students in the Department of Biblical Literature. Those who intend to compete must give their names to the head of the department not later than March 1, and essays, under an assumed name, must be delivered to the Registrar not later than the first Saturday in May. For 1912–13 the subject is: *The Story of Joseph.* For 1911–12 the subject was: *Hellenism in Judea.* The prizes were awarded as follows:

*The first prize to* JAMES RUSSELL CASE
*The second prize to* HORACE WHIPPLE WOODBURY

THE WILLIAM GASTON SCHOLARSHIP. This fund of five thousand dollars was established in 1899 by the widow and children of the Honorable William Gaston, LL.D., of the class of 1840. Its income is awarded annually by the Faculty solely upon merit, without reference to financial condition. For 1912–13 this scholarship was awarded to

JOHN KENT STARKWEATHER

THE GASTON PRIZE MEDAL FOR EXCELLENCE IN ORATORY. From the income of a fund of three thousand dollars established in 1894 as a memorial to the Honorable William Gaston, LL.D., of the class of 1840, a gold medal is annually awarded to the member of the graduating class who delivers the best original oration in English. The orations are not to exceed fifteen hundred words. In order to compete for the prize, a student must deposit with the Registrar a typewritten copy of his oration, signed with an assumed name, six weeks before the public competition. From these orations a committee appointed by the President of the University selects not more than six for delivery. The committee of award in the final contest consists of three members appointed by the President. In making the award, regard is given

to thought, style, and delivery. The winner of the medal is entitled to deliver an oration at Commencement. In 1913 the orations must be deposited with the Registrar on or before March 26; the public competition will be held on May 6. In 1912 this prize was awarded to

JOHN HENRY WILLIAMS

## HONOR SCHOLARSHIPS

To encourage proficiency in studies and to provide recognition for successful application to college work, the Faculty has established Honor Scholarships without aid as follows:

THE JAMES MANNING SCHOLARSHIPS, awarded to those undergraduates whose work throughout the year has been of such excellence that they are deemed worthy of very high academic distinction.

For 1911–12 these scholarships were awarded as follows:

*Class of 1912*

Edward August Adams
Clarence Edwin Ayres
Zue Sun Bien
Arthur Francis Buddington
Frederick Burgess, Jr.
Clarence Frank Gifford
Charles Ambrose Malloy
Samson Nathanson
William Henderson Robertson
John Henry Williams
Herbert Edward Wolfe

*Class of 1913*

Charles Harlan Abbott
Preston Franklin Arnold
Karl Henry Koopman
John Kent Starkweather

*Class of 1914*

Arthur William Cate
Raymond Abner Preston

*Class of 1915*

Ismar Baruch
Ralph Leon Blanchard

THE FRANCIS WAYLAND SCHOLARSHIPS, awarded to those undergraduates who have shown marked excellence in their work, but have not attained the standard required for the James Manning scholarships.

For 1911–12 these scholarships were awarded as follows:

*Class of 1912*

Warren Randolph Burgess
Robert Cloutman Dexter
Robert James Yorkston Meckel
Francis Dyer O'Connor
Wilbur Bertram Purvis
Irving Russell Smith
Robert Stanley Thompson

*Class of 1913*

Samuel Tomlinson Arnold
Frank Carleton Blake
Harry Chamberlain Brown
Leon Clifford High

Albert Pray Martin Clarence Newton Reynolds, Jr.
Clarence Horace Philbrick

*Class of 1914*
James Joseph McGovern

*Class of 1915*
George Fremont Bliven Milton Hammond Stansbury

## APPOINTMENTS FOR COMMENCEMENT

At Commencement four members of the graduating class deliver original orations in English of not more than fifteen hundred words each. One speaker is the winner of the Gaston medal; the others are appointed by the Faculty on the recommendation of a special committee on Commencement speakers. The basis of selection is scholarship, ability to write, and ability to speak. In 1912 the speakers selected by the Faculty were:

Daniel Lucius Brown William Henderson Robertson
John Henry Williams

## FINAL HONORS

Final Honors in any department are awarded, at the completion of the studies leading to a bachelor's degree, to those who have secured: (1) A mark of A in courses in the department aggregating twelve or more semester hours; (2) a mark of B or A in eighty-five per cent of all their courses of study. In any department, however, certain specified courses may not be included in those counted for Final Honors. The names of all students awarded Final Honors are printed in the Commencement Program and in the Annual Catalogue. In 1912 the awards were as follows:

Daniel Lucius Brown, *Chemistry.*
Arthur Francis Buddington, *Chemistry, Geology, Mathematics.*
Warren Randolph Burgess, *Philosophy.*
Ralph Harold Chadwick, *Mathematics.*
Daniel Gerald Donovan, *English.*
James Cornelius Elms, Jr., *Roman Literature and History.*
Theodore Bryant Farnsworth, *Mathematics, Mechanical Engineering.*
Paul Hart Francis, *Civil Engineering.*
Clarence Frank Gifford, *Biblical Literature and History.*
Abraham Harry Gretsch, *Mathematics.*
Joseph Dydime Guillemette, *Civil Engineering.*
Ralph Gibney Hurlin, *Social and Political Science.*

Charles Ambrose Malloy, *Greek Literature and History, History, Roman Literature and History, Romance Languages and Literatures.*
Romeo Raoul Martel, *Civil Engineering, Mathematics.*
Samson Nathanson, *English, Romance Languages and Literatures.*
Arthur Franklin Newell, *English, Philosophy.*
Frederick William Seagrave, *Physics.*
Irving Russell Smith, *Civil Engineering.*
Robert Stanley Thompson, *English.*
William Andrew Weidmann, *Germanic Languages and Literatures.*
Howard Carlton White, *Civil Engineering, Physics.*
John Henry Williams, *English, History.*
Herbert Edward Wolfe, *Chemistry, Romance Languages and Literatures.*

Harriet Colburn Bennett, *Biblical Literature and History, Philosophy.*
Mildred Catherine Bishop, *History, Romance Languages and Literatures.*
Gertrude Morton Butler, *Germanic Languages and Literatures, Romance Languages and Literatures.*
Elinor Margaret Caldwell, *Germanic Languages and Literatures.*
Margaret Griswold Collins, *Roman Literature and History.*
Beatrice Florence Kohlberg, *Mathematics.*
Clara Irene Perry, *Germanic Languages and Literatures.*
Annie Pickles, *Astronomy, Biology, Mathematics.*
Margaret Parkhurst Stevens, *English, Germanic Languages and Literatures, History, Roman Literature and History.*
Mary Sweetland, *Mathematics.*
Ann Eliza Thomas, *English, History.*
Dorothy Charlotte Walter, *English, Germanic Languages and Literatures.*
Irene Warren, *Education, Germanic Languages and Literatures, Mathematics.*

# DEGREES CONFERRED IN 1912

## DEGREES IN COURSE

### BACHELOR OF ARTS

Charles Fulda Archambault
Clarence Edwin Ayres
Daniel Lucius Brown
Harry Gilbert Brown
Frederick Burgess, Jr.
George Sargent Burgess
Warren Randolph Burgess
Adolph Odin Christiansen
Sheldon Chalkley Collins
William Walter Cummings
Ernest Merrill Daland
Wilbur Stone Deming
Robert Cloutman Dexter
William Hovey Dinkins
Daniel Gerald Donovan
James Cornelius Elms, Jr.
Orrin Robinson Ferry
Clarence Frank Gifford
John Joseph Gilbert
Abraham Harry Gretsch
Raymond Preston Hawes
Wright David Heydon. *With the class of* 1911
Preston Hart Hood
Ralph Gibney Hurlin
Walter Wade Jackson. *With the class of* 1911
Wellington Le Roy Jencks
George Valentine Kendall
Archibald Collins Ladner
Samuel May Lederer. *With the class of* 1911
John Francis McLaughlin
Charles Ambrose Malloy
Robert James Yorkston Meckel
Everett Howe Miller
Nicholas Van Slyck Mumford
Samson Nathanson
Arthur Franklin Newell
Francis Dyer O'Connor
Earl Philo Perkins
William Lester Phillips
Mellen Howard Pingree
Wilbur Bertram Purvis
William Henderson Robertson
Edwin Maurice Rose
Harold Preston Salisbury
John Herschel Spindler
Robert Stanley Thomson
William Andrew Weidmann
John Henry Williams
John Tracy Winterich
Herbert Edward Wolfe

Lydia Harris Andrews. *With the class of* 1911
Lottie Maria Angell
Mildred Catherine Bishop
Annie Philips Borland
Gertrude Morton Butler
Elinor Margaret Caldwell
Marion Frances Catlin
Margaret Brooks Church
Margaret Griswold Collins
Gertrude Mary Conant
Minnie May Fogg
Reginna Theresa Loftus
Clare Edgarton Longley
Jessie Isabelle Monroe
Ida May Nichols
Ollie Annette Randall
Clarice Emily Ryther

Margaret Parkhurst Stevens
Mary Sweetland
Hazel Marguerite Valentine
Irene Warren

BACHELOR OF PHILOSOPHY

Edward August Adams
Ryland Benjamin Andrews
Edgar Paul Bengert
Zue Sun Bien
Preble Wilson Blake
Arthur Francis Buddington
Hermon Carey Bumpus
Leroy Francis Burroughs
Edgar Gibson Buzzell
Henry Conyers
Lawton Vincent Crocker
Herbert Knight Dennis
Ralph Sherwin Drury
Thomas Lester Fletcher
Willard Fremont Gordon, Jr.
Edwin Rogers Handy
Rodney Williams Hewitt
Jacob Freeman High. *With the class of* 1911
Edward Lapham Hill
John Sprague Hodgson. *With the class of* 1911
Karl Humphrey
Howard Prann Jones
Lowell Clapp Kendrick
Charles Roland Klebes
Royal Willis Leith
John Terence Campbell McGuire
Howard Gove MacMillan
Dennis Robert Mahoney
Francis Everett Miles
Samuel Lyman Mitchell
Kenneth Leland Nash
Walter Chadwick Nelson
Edward Bates Peck
Fred Clarence Perry
Milledge Moses Purdy
William Frederick Scholze, Jr.
Harry George Seidel
Harold Everett Smiley
William Earl Sprackling
Herbert Wines Stanley
William Leroy Stidger
Henry Jennison Blakeley Stitt. *With the class of* 1911
Yuen Fong Ralph Sun
Kenneth James Tanner
John Von der Leith
George Bennett Weston
Alfred Howard Williamson
Richard Bartley Wilson
Rhodes Walter Zallee

Elsie Angeline Anderson
Mela Elsie Bennett
Harriet Colburn Bennett
Laura Elizabeth Cooke
Marion Jane Emsley
Irene Hawes
Beatrice Florence Kohlberg
Clara Irene Perry. *With the class of* 1911
Annie Pickles
Florence Binford Southwick
Marion Slater Stone
Ann Eliza Thomas
Dorothy Charlotte Walter

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Kenly Smith Bell
Leon Henry Beytes
John Watson Brown
Joseph Harrison Conzelman

Lionel Victor Domin
Walter Johnson Emmons
Paul Hart Francis
Joseph Dydime Guillemette
Harry Willey Kenney
Jerome Francis Joseph McGehearty
Romeo Raoul Martel
Clarence Walker Miller
Harry Arthur Pantaenius. *With the class of* 1911
George Anton Repko
John Harvey Rowland
Albert Curtis Ruger
Frederick William Seagrave
Irving Russell Smith
Leon Elwood Smith
Harry Melvin Sutton
Ernest Albert Tewksbury
Howard Carlton White
Robert Henry Wills

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

John Thomas Barnicoat. *With the class of* 1906
Frank Clifford Barrows, Jr.
Stuart Blake
Theodore Bryant Farnsworth
Earl Edmund Jackson. *With the class of* 1911
Frederick George Rawlings
Alan Arthur Slade
Allen Burnett Williams

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Carl Edmond Burnham
Hudson Coe Burr
Everett Shearman Carpenter. *With the class of* 1911
Ralph Harold Chadwick
Adelbert Charles Eastburn
Carleton Hall Parker
Frederick Leonard Tedford
Edward Emory Warner

MASTER OF ARTS

Ernest Spencer Abbott, A.B.
Richard Day Allen, A.B.
Helen Newell Bell, A.B.
Irving Hill Blake, A.B.
Warren Randolph Burgess
Gertrude Hildreth Campbell, A.B.
Florence Alice Crossley, A.B.
Orrin Robinson Ferry
Arline Field, Ph.B.
Charles Edward Fisher, A.B.
John Howard Forrist, Ph.B.
Helen Emilie Gindele, A.B.
Irma Alida Gyllenberg, A.B.
Frederick Marshall Jencks, Ph.B.
Royal Willis Leith
Herbert Collins Long, A.B.
Roy Lawson McLaughlin, A.B.
Audrey Mallett, A.B.
Charles Ambrose Malloy
Grace Marchant, A.B.
Mark Mohler, Ph.B.
Courtland Sawin Mudge, Ph.B.
John Milburn Price, A.B.
Royal Paul Richardson, A.B.
George Henry Robinson, A.B.
Claris Edwin Silcox, A.B.
Albert Whitman Sweet, A.B.
Elizabeth Dexter Thacher, A.B.

Edward Lincoln Dwight Turner, Ph.B., M.D.

Mildred Corinne Williams, A.B.

MASTER OF SCIENCE

Robert Gamble Caswell, Ph.B.

Howard Greenough Hubbard, Ph.B.

DOCTOR OF PHILOSOPHY

Charles Raymond Austin, A.M.

THESIS: "The Relation of Accent to the Second Syllable of Elisions involving Pause in Latin Dactyllic Hexameter and Pentameter."

William Ward Browne, A.M.

THESIS: "Acid Production by the Bacillus Ooli Group."

John Wymond Miller Bunker, A.M.

THESIS: "Colon Bacilli in Polluted Oysters."

Robert Foster Chambers, Sc.M.

THESIS: "A Study of Symmetrical Tribrom Phenyl Propiolic Acid."

Frank Edwin Lakey, A.M.

THESIS: "A Study of Crime in Rhode Island."

Walter Edward Sullivan, A.M.

THESIS: "Pseudopleuronectes Americanus."

## DEGREES OUT OF COURSE

BACHELOR OF ARTS

Edward Gifford Kelton. *With the class of 1863*

## HONORARY DEGREES

MASTER OF ARTS

WILLIAM COLVER HILL
SYDNEY RICHMOND BURLEIGH

DOCTOR OF DIVINITY

ROBERT ARCHIBALD ASHWORTH
WILLIAM SHEAFE CHASE
JAMES DEWOLF PERRY

DOCTOR OF SCIENCE

WILLIAM JOSEPH HUSSEY

DOCTOR OF LETTERS

DANA CARLTON MUNRO

DOCTOR OF LAWS

LEWIS EZRA HICKS
EZRA RIPLEY THAYER
INAZO NITOBE

# LIST OF STUDENTS

## GRADUATES

Lottie Maria Angell — *Providence*
A.B. (*Brown University*) 1912. Education. Registered candidate for A.M.

Elizabeth Williams Anthony — *Lewiston, Me.*
A.B. (*Bates College*) 1908; A.M. (*Columbia University*) 1911. Social and Political Science.

Simon Louie Aron — *Providence*
Geology, Biblical Literature. Enrolled candidate for A.M.

Florence Parsons Aronovici — *Providence*
A.B. (*Cornell University*) 1905. Social Science.

Charles Hervey Bailey — *New York, N. Y.*
A.B. (*Brown University*) 1903; M.D. (*Harvard University*) 1910. Biology, German, French. Registered candidate for A.M. *in absentia.*

Harris Merrill Barbour — *Providence*
A.B. (*Brown University*) 1906; B.D. (*Newton Theological Seminary*) 1909. Philosophy, Biology. Enrolled candidate for A.M. Registered candidate for Ph.D.

Harriet Colburn Bennett — *Providence*
Ph.B. (*Brown University*) 1912. Education. Registered candidate for A.M.

Irving Hill Blake — *Augusta, Me.*
A.B. (*Bates College*) 1911; A.M. (*Brown University*) 1912. Biology. Registered candidate for Ph.D.

John Oliver Blanton, Jr. — *Versailles, Ky.*
A.B. (*State University of Kentucky*) 1909. Social Science, Economics, Mathematics. Enrolled candidate for A.M.

George Boas — *Providence*
English, Philosophy. Enrolled candidate for A.M.

William Alva Brady — *Narragansett Pier*
Ph.B. (*Brown University*) 1894; A.M. 1908. Education.

Laurence Lindsay Brown — *Fall River, Mass.*
A.B. (*Harvard University*) 1910; A.M. 1911. Education.

Arthur Francis Buddington — *West Mystic, Ct.*
Ph.B. (*Brown University*) 1912. Geology, Chemistry, Physics. Enrolled candidate for M.S.

Joseph Richard Bullock, Jr. — *Providence*
Ph.B. (*Brown University*) 1896; A.M. 1897. Political Science, English, Romance Languages. Registered candidate for Ph.D.

Alice Sheehan Carroll — *Providence*
A.B. (*Brown University*) 1903. Education, English. Registered candidate for A.M.

Charles Carroll — *Providence*
A.B. (*Brown University*) 1898; LL.B. (*Harvard University*) 1901. Political and Social Science, Education, Economics. Enrolled candidate for A.M.

Robert Gamble Caswell — *Wakefield*
Ph.B. (*Brown University*) 1911; M.S. 1912. Chemistry, Physics. Registered candidate for Ph.D.

Margaret Brooks Church — *Providence*
A.B. (*Brown University*) 1912. Botany, Chemistry. Registered candidate for A.M.

Alice May Comstock — *Providence*
A.B. (*Smith College*) 1912. Social Science.

Emma Henrietta Dahlgren *Providence*
A.B. (*Brown University*) 1911. Education, English. Enrolled candidate for A.M.

Wayne Edward Davis *Rochester, N. H.*
A.B. (*Bates College*) 1912. Education, History, Political Science. Enrolled candidate for A.M.

William Learned Dealey *Providence*
Social Science, Psychology. Enrolled candidate for A.M.

Walter William Deckard *Arlington*
B.S. (*Rio Grande College*) 1893; A.B., B.D. (*Hillsdale College*) 1899; A.M. (*Brown University*) 1905. Social and Political Science, Philosophy. Enrolled candidate for Ph.D.

Robert Cloutman Dexter *Boston, Mass.*
A.B. (*Brown University*) 1912. Social and Political Science, Biology, History. Registered candidate for A.M.

Bhupendra Nath Dutt *Calcutta, India*
A.B. (*New York University*) 1912. Social and Political Science, Economics. Enrolled candidate for A.M.

Arline Field *Providence*
Ph.B. (*Brown University*) 1911; A.M. 1912. Biology, Chemistry. Registered candidate for Ph.D.

Paul Hart Francis *Providence*
B.S. (*Brown University*) 1912. Physics, Mathematics, Mechanics and Mechanical Engineering, Biology. Enrolled candidate for M.S.

John Alfred Furrer *Fall River, Mass.*
A.B. (*Trinity College*) 1907. Social Science, History, Biblical Literature. Enrolled candidate for A.M.

Clarence Frank Gifford *Danielson, Ct.*
A.B. (*Brown University*) 1912. Philosophy, Biblical Literature, Social Science. Enrolled candidate for A.M. Registered candidate for Ph.D.

Margaret Amy Gifford *Providence*
A.B. (*Wellesley College*) 1910. German, French.

Harold Alden Grout *East Bridgewater, Mass.*
Mathematics, Physics, Biology. Enrolled candidate for A.M.

Adelbert Hayes Harrington *Pontiac*
A.B. (*Olivet College*) 1901. Philosophy, English, Social Science. Registered candidate for A.M.

Harry Worthington Hastings *Agawam, Mass.*
A.B. (*Brown University*) 1904; A.M. (*Harvard University*) 1906. German.

Raymond Preston Hawes *Riverside*
A.B. (*Brown University*) 1912. Philosophy, English, Biblical Literature. Enrolled candidate for A.M.

Alfred Cary Hawkins *Plainfield, N. J.*
B.S. (*Columbia University*) 1909; A.M. (*Princeton University*) 1912. Geology. Registered candidate for Ph.D.

Samuel Lee Haworth *Fall River, Mass.*
Ph.B. (*Chattanooga University*) 1887; Biblical Literature, History. Enrolled candidate for A.M.

Henry Horace Hibbs, Jr. *Murfreesboro, Tenn.*
A.B. (*Williamsburg Institute*) 1908; A.B. (*Brown University*) 1911; A.M. 1912. Social and Political Science. Registered candidate for Ph.D.

Carl Holman *Saylesville*
A.B. (*Bates College*) 1909. Education. Registered candidate for A.M.

Norman Edward Holt *Providence*
A.B. (*Brown University*) 1910; M.S. 1911. Chemistry, Physics, Mathematics. Enrolled candidate for Ph.D.

Nathaniel Orson Howard *Conimicut*
Ph.B. (*Brown University*) 1903. Chemistry. Registered candidate for M.S.

Ralph Gibney Hurlin *Antrim, N. H.*
A.B. (*Brown University*) 1912. Biology, Chemistry. Enrolled candidate for A.M. Registered candidate for Ph.D.

Frederic Marshall Jencks *West Barrington*
Ph.B. (*Brown University*) 1911; A.M. 1912. History.

Lowell Kendrick *Hempstead, N. Y.*
Ph.B. (*Brown University*) 1912. Biology, Chemistry. Enrolled candidate for A.M. Registered candidate for Ph.D.

Charles Franklin Kincaid *Franklin, Ind.*
A.B. (*Franklin College*) 1912. Education, History, Economics. Registered candidate for Ph.D.

Beatrice Florence Kohlberg *Providence*
Ph.B. (*Brown University*) 1912. Education. Registered candidate for A.M.

Daniel Harrison Kulp *Pottstown, Pa.*
Biblical Literature, Social Science. Enrolled candidate for A.M.

Archibald Collins Ladner *Springfield, Mass.*
A.B. (*Brown University*) 1912. Mathematics, Education, Physics. Enrolled candidate for A.M.

Alice Gertrude Langford *Fall River, Mass.*
A.B. (*Smith College*) 1909. English, History, Philosophy. Registered candidate for A.M.

John Leacher *Cornwall, England*
A.B. (*Hamlin University*) 1901; B.D. (*Seabury Divinity School*) 1904; B.D. (*Episcopal Divinity School, Cambridge*) 1909. Philosophy, Social Science. Enrolled candidate for A.M.

Benjamin Towne Leland *Providence*
A.B. (*Harvard University*) 1906. Education. Registered candidate for A.M.

Benjamin Samuel Levine *Rockville, Ct.*
B.S. (*Trinity College*) 1912. Biology, Chemistry. Enrolled candidate for A.M. Registered candidate for Ph.D.

John Joseph Long *Woonsocket*
Ph.B. (*Yale University*) 1907. Mathematics, Mechanics, and Mechanical Engineering, Electrical Engineering. Enrolled candidate for M.S.

Samuel E. Longwell *Woodbury, Ct.*
A.B. (*Bates College*) 1902. Biology, Chemistry. Enrolled candidate for A.M. Registered candidate for Ph.D.

Joseph Anthony McCaull *Providence*
Social Science, Education, Art. Enrolled candidate for A.M.

Charles Everett McCoy *Smethport, Pa.*
A.B. (*Cornell University*) 1906. Biblical Literature, Art, English. Enrolled candidate for A.M.

Alfred Joseph Maryott *Valley Falls*
A.B. (*Brown University*) 1908. Education. Enrolled candidate for A.M.

Robert James Yorkston Meckel *St. Louis, Mo.*
A.B. (*Brown University*) 1912. Education, German, Latin. Enrolled candidate for A.M.

Raymond Eli Mendenhall *Earlham, Iowa*
A.B. (*Penn College*) 1912. Philosophy, Biblical Literature, Social Science. Registered candidate for A.M.

Jeannette Bell Moffitt *Providence*
Ph.B. (*Brown University*) 1911. Education, History, Art. Enrolled candidate for A.M.

Mark Mohler *Los Angeles, Cal.*
Ph.B. (*Brown University*) 1911; A.M. 1912. Biblical Literature, Philosophy, History. Registered candidate for Ph.D.

Jessie Isabelle Monroe *Providence*
A.B. (*Brown University*) 1912. Education. Registered candidate for A.M.

Mildred Louise Mott *Providence*
German, History. Enrolled candidate for A.M.

Jesse Benton Mowry *Chepachet*
B.S. (*Norwich University*) 1892. Philosophy, Botany. Enrolled candidate for A.M.

Eugene Richard Musgrove *Bristol, N. H.*
B.S. (*Dartmouth College*) 1905. English, Education. Enrolled candidate for A.M. *in absentia.*

Walter Chadwick Nelson *Fall River, Mass.*
Ph.B. (*Brown University*) 1912. Biology. Enrolled candidate for A.M.

Ida May Nichols *Providence*
A.B. (*Brown University*) 1912. Education. Registered candidate for A.M.

Artley Beeber Parson *Providence*
A.B. (*Harvard University*) 1903. Biblical Literature, Philosophy. Registered candidate for A.M.

Sabin Cubbage Percefull *Marlow, Okla.*
A.B. (*Baylor University*) 1912. Economics, Social Science. Enrolled candidate for A.M.

Alice Manchester Potter *Providence*
A.B. (*Brown University*) 1908. History, Education, Economics. Enrolled candidate for A.M.

Dora Allan Reid *Seattle, Wash.*
A.B. (*Smith College*) 1907. English, Education. Enrolled candidate for A.M.

Carl Tracy Rhoades *Harmony, Me.*
A.B. (*Bates College*) 1912. Education, Astronomy. Enrolled candidate for A.M.

Jeannette Rinaldo *Geneseo, Ill.*
A.B. (*Smith College*) 1912. Education, Latin. Enrolled candidate for A.M.

George Henry Robinson *Lewiston, Me.*
A.B. (*Bates College*) 1911; A.M. (*Brown University*) 1912. Biology, Botany. Registered candidate for Ph.D.

Sarah Gridley Ross *Cortland, N. Y.*
A.B. (*Brown University*) 1905. English, Biblical Literature. Registered candidate for A.M.

Chester Roy Shaw *Pawtucket*
B.S. (*Massachusetts Institute of Technology*) 1905. Education. Registered candidate for A.M.

Harold Everett Smiley *Providence*
Ph.B. (*Brown University*) 1912. Biology, Chemistry. Enrolled candidate for M.S.

George Hathorn Smith *Meredith, N. H.*
A.B. (*Bates College*) 1909; A.M. (*Brown University*) 1910. Biology. Enrolled candidate for Ph.D.

John L. Smith *Auburn*
A.B. (*Rhode Island State College*) 1908. Education. Registered candidate for A.M.

Iva Burton Stilson *Providence*
D.D.S. (*University of Pennsylvania*) 1895. Psychology.

Ada Elizabeth Sweet *Chazy, N. Y.*
A.B. (*Mount Holyoke College*) 1911. Education, Social Science. Enrolled candidate for A.M.

Albert Whitman Sweet *Providence*
Ph.B. (*Brown University*) 1911; A.M. 1912. Biology, Chemistry, Botany. Registered candidate for Ph.D.

Mary Sweetland *Providence*
A.B. (*Brown University*) 1912. Art, Greek, Latin. Registered candidate for A.M.

Augustus Taber Swift *Providence*
A.B. (*Brown University*) 1889; A.M. 1890; Ph.D. 1896. Latin.

Kenneth James Tanner *Providence*
Ph.B. (*Brown University*) 1912. Biology, Chemistry, Geology. Registered candidate for A.M.

Charles Franklin Towne *Providence*
A.B. (*Colby College*) 1900. Education, Social Science, Economics. Registered candidate for A.M.

Richard Dana Tucker *Providence*
Ph.B. (*Brown University*) 1906. Education, Biology. Registered candidate for A.M.

Margaret Frances Upton *Providence*
A.B. (*Smith College*) 1912. Biology, Chemistry.

John Frederic Von der Leith *Hoboken, N. Y.*
Ph.B. (*Brown University*) 1912. Biology, Chemistry. Enrolled candidate for M.S. Registered candidate for Ph.D.

Amy Mildred Wentworth *Brockton, Mass.*
A.B. (*Mount Holyoke College*) 1912. Education. Registered candidate for A.M.

George Franklin Weston, Jr. *Providence*
Ph.B. (*Brown University*) 1909. Education, Psychology, Social Science. Enrolled candidate for A.M.

Lucius Albert Whipple *Pawtucket*
B.S. (*Rhode Island State College*) 1908. Education. Registered candidate for A.M.

John Henry Williams *North Adams, Mass.*
A.B. (*Brown University*) 1912. English. Registered candidate for A.M.

John Tracy Winterich *Providence*
A.B. (*Brown University*) 1912. English, History. Registered candidate for A.M.

Herbert Edward Wolfe *West Mystic, Ct.*
A.B. (*Brown University*) 1912. History, Education, Political Science. Enrolled candidate for A.M.

Christopher Herbert Yearwood *British Guiana, S. A.*
B.D. (*Yale University*) 1911. Biblical Literature, Philosophy, Education. Enrolled candidate for A.M. Registered candidate for Ph.D.

Walter Allen Young *Providence*
Ph.B (*Brown University*) 1891. Education. Enrolled candidate for A.M.

## SENIORS: CLASS OF 1913

| NAME | RESIDENCE |
|---|---|
| Charles Harlan Abbott | *Antrim, N. H.* |
| Preston Franklin Arnold | *Touisset, Mass.* |
| Samuel Tomlinson Arnold | *Corinna, Me.* |
| Simon Louie Aron | *Providence* |
| Russell Gilman Ashbaugh | *Youngstown, Ohio* |
| William Emerson Bailey | *Montpelier, Vt.* |
| John Raymond Bair | *Canton, Ohio* |
| Howard Bates Baker | *Providence* |
| Herbert Clarence Banks | *Fredonia, N. Y.* |
| Walter Jason Bass | *Hyde Park, Mass.* |
| Frank Carleton Blake | *Providence* |
| Earle Henry Blanchard | *Readsboro, Vt.* |
| William Winthrop Blodgett | *Pawtucket* |
| George Boas | *Providence* |
| Leighton Teeterick Bohl | *Edgewood* |
| Harry Chamberlain Brown | *Marblehead, Mass.* |
| Marmaduke Cope Buffum | *Newport* |
| Ralph Everett Burnham | *Central Falls* |
| Joseph Knowles Burwell | *Providence* |
| Leon Hartshorn Carr | *Bradford, N. H.* |
| James Russell Case | *South Acton, Mass.* |
| John Casey, Jr. | *Providence* |
| Richard Vance Coburn | *Manchester, N. H.* |
| Porter Durant Collins | *Laconia, N. H.* |
| Raymond Carpenter Colwell | *Olneyville* |
| Frederick Eames Cooper | *Providence* |
| Everett Thomas Cripps | *Providence* |
| George Marsden Crowther | *Pawtucket* |
| Ralph Brinckerhoff Crum | *Poughkeepsie, N. Y.* |
| Lloyd Roswell Cummings | *Bradford, N. H.* |
| John Houston Cushman | *Guilford, Me.* |
| Francis Perry Davis | *Providence* |
| William Learned Dealey | *Providence* |
| Harold Faunce Dumbleton | *Springfield, Mass.* |
| William Raymond Eastwood | *Providence* |
| Russell Watts Field | *Barrington* |
| Karl Dana Gardner | *Fall River, Mass.* |
| Walter Hibberd Garrett | *Chadds Ford, Pa.* |
| Victor Carl Gelb | *Providence* |
| Jeffrey Solon Goldberg | *New York, N. Y.* |
| Matthew Gormley, Jr. | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Adrian Gordon Gould | *Youngstown, Ohio* |
| Harold Alden Grout | *East Bridgewater, Mass.* |
| Frederic Howland Guild | *Providence* |
| Clifford Aylward Hahn | *Brooklyn, N. Y.* |
| Kenneth Standish Hall | *Worcester, Mass.* |
| Benjamin Malcolm Harris | *Lowell, Mass.* |
| James Eddy Harris | *Providence* |
| George Nathan Hazard | *Narragansett Pier* |
| Edwin Gustav Hempel | *Providence* |
| Arthur Henry Higgins | *Charleston, Me.* |
| Leon Clifford High | *Providence* |
| Arthur Whitney Howe, Jr. | *Philadelphia, Pa.* |
| William Mason Howe | *Seekonk, Mass.* |
| Norman Bigelow Hull | *Brooklyn, N. Y.* |
| Abraham Samuel Isaacson | *Bristol* |
| Cedric Freeman Joslin | *Portland, Me.* |
| Karl Henry Koopman | *Providence* |
| Oliver Moyer Kratz | *Philadelphia, Pa.* |
| Daniel Harrison Kulp | *Pottstown, Pa.* |
| William Dickson Lamond | *Providence* |
| Duncan Langdon | *Brookline, Mass.* |
| George Woodward Langdon | *Brookline, Mass.* |
| Allan Lincoln Langley | *Newport* |
| Alfred Bunyan Lemon | *Cleveland, Ohio* |
| Ira Lloyd Letts | *Moravia, N. Y.* |
| Leroy Everett Loxley | *Providence* |
| Joseph Anthony McCaull | *Providence* |
| Benjamin Murrie McLyman | *Newport* |
| Andrew Hamilton McPhail | *North Adams, Mass.* |
| Daniel Lawrence Mahoney | *Newton, Mass.* |
| Albert Pray Martin | *Pawtucket* |
| George Tucker Metcalf | *Wickford* |
| Carleton Doty Morse | *New Bedford, Mass.* |
| Randolph Morse | *Brookline, Mass.* |
| Harold Winthrop Munro | *Providence* |
| Edward Andrew Cushman Murphy | *Mount Sinai, N. Y.* |
| Louis Israel Newman | *Providence* |
| Herbert Farwell Osteyee | *Ausable Forks, N. Y.* |
| Otto Carl Pahline | *East Providence* |
| Cecil Carlton Parker | *Hyde Park, N. Y.* |
| Howard Fullerton Parker | *Lynn, Mass.* |
| Wyman Pendleton | *Youngstown, Ohio* |
| Clarence Horace Philbrick | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Jackson Cole Phillips | *Providence* |
| James Henry Readio, Jr. | *Pawtucket* |
| Horace Ray Redington | *Elyria, Ohio* |
| William Joseph Reed | *North Adams, Mass.* |
| Joseph Francis Reilly | *Brockton, Mass.* |
| Clarence Newton Reynolds, Jr. | *Providence* |
| Kenneth Stillman Rice | *Gloucester, Mass.* |
| Charles Herbert Ricker | *Providence* |
| Thomas Howarth Roberts | *Providence* |
| Benjamin Israel Robinson | *Providence* |
| Richard Dodson Robinson | *Baltimore, Md.* |
| Herbert Duncan Rollason | *Cambridge, England* |
| Warren Root | *Providence* |
| Herbert Mortimer Rosenberg | *New York, N. Y.* |
| John Evans Rouse | *Denver, Col.* |
| Thomas Clark Shedd | *East Providence* |
| Israel Remington Sheldon | *Central Falls* |
| Marshall Kingston Sheldon | *Pawtucket* |
| Leonard Walter Smith | *Pawtucket* |
| Warren Hutchinson Smith | *Lincoln* |
| Walter Henry Snell | *Brockton, Mass.* |
| Charles Raymond Somers | *Mansfield, Mass.* |
| John Kent Starkweather | *Denver, Col.* |
| Clifford John Stevens | *Brooks, Me.* |
| William Matthew Sullivan | *Fall River, Mass.* |
| Reynolds Sweetland | *Providence* |
| Norman Stephen Taber | *Providence* |
| Louis Clifford Taylor, Jr. | *Trenton, N. J.* |
| Lemuel Halsted Thompson | *Morristown, N. J.* |
| Harold Clifton Tooker | *Larchmont, N. Y.* |
| Earl Whalley Tucker | *Allentown* |
| Payson Waite Tucker | *Narragansett Pier* |
| Charles Waterman Walker | *Meshanticut* |
| John Tempest Walker, Jr. | *Providence* |
| Edward Strawn Walton | *Youngstown, Ohio* |
| Elisha Carpenter Wattles | *Dorchester, Mass.* |
| Winter Arnold White | *Groton, Ct.* |
| Willis Carey Wilber | *Buffalo, N. Y.* |
| Frederick Henry Wilke | *Morristown, N. J.* |
| Frederick Crawford Williams | *Pawtucket* |
| James Taylor Wilson | *Youngstown, Ohio* |
| Horace Whipple Woodberry, Jr. | *Beverly, Mass.* |
| Maynard Earle Wright | *Montpelier, Vt.* |

## JUNIORS: CLASS OF 1914

| NAME | RESIDENCE |
|---|---|
| David Isaac Adelman | *Providence* |
| James Gelston Affleck, Jr. | *Yonkers, N. Y.* |
| Lester Johnson Ainsworth | *Attleboro, Mass.* |
| James Grant Anderson | *Andover, Mass.* |
| Charles Louis Bagnall | *North Attleboro, Mass.* |
| Arthur Elliot Bartlett | *Harwichport, Mass.* |
| Albert Edwin Beachen | *Pawtucket* |
| Stephen Sibley Bean | *Woburn, Mass.* |
| Charles Everett Blackway | *Fall River, Mass.* |
| Irving Thayer Boardman | *Providence* |
| Raymond Franklin Borden | *Newport* |
| Edward Tappan Brackett | *Boston, Mass.* |
| Charles Edward Brady | *Providence* |
| Earl Kingsley Brown | *Whitinsville, Mass.* |
| Howard Adams Brown | *Brattleboro, Vt.* |
| Watson Frederick Buehler | *Newark, N. J.* |
| Elliot Towle Bugbee | *North Attleboro, Mass.* |
| Arthur William Cate | *Providence* |
| Hubert Hayward Champney | *Taunton, Mass.* |
| William Albert Chappell | *Ashaway* |
| Ernest Rexford Cleaveland | *Providence* |
| Austin Norcross Cook | *Providence* |
| Edwin Pulver Cook | *Moravia, N. Y.* |
| Joseph Edward Cook | *Uxbridge, Mass.* |
| Frank Merrill Cram | *Lakeport, N. H.* |
| James Lawrence Cummings | *Fall River, Mass.* |
| Harold Leavitt Cushing | *Seekonk, Mass.* |
| Clarence Adelbert Davis | *East Killingly, Ct.* |
| Peter Francis Dugan | *Newburyport, Mass.* |
| Eugene Ross Dukette | *Plattsburg, N. Y.* |
| Arthur Dudley Durgin | *Hopedale, Mass.* |
| Frederick Willard Easton, Jr. | *Pawtucket* |
| Lester David Ehmke | *Silver Creek, N. Y.* |
| Edward Irving Everett | *Franklin, Mass.* |
| Joseph Hollister Farnham | *Providence* |
| Abraham Feitelberg | *Fall River, Mass.* |
| Chester Arthur Files | *White Rock, Me.* |
| Herbert Elliott Foote | *Pawtucket* |
| Marion Kenneth Forward | *Greeley, Col.* |
| Silas William Foss | *Laconia, N. H.* |
| Alexander Andrew Gardiner | *Holyoke, Mass.* |

| NAME | RESIDENCE |
|---|---|
| James Vincent Giblin | *Fall River, Mass.* |
| Rod Allen Gillis | *Pugwash, N. S.* |
| George Sidney Goodspeed | *Oak Lawn* |
| Benjamin Harry Grossman | *Providence* |
| Jonathan Pyott Hadfield | *Edgewood* |
| Russell Wyman Hall | *Mansfield, Mass.* |
| Earl Whittemore Harrington | *Providence* |
| Wallace Elmer Harris | *Providence* |
| Frederick Rowland Hazard, Jr. | *Syracuse, N. Y.* |
| David Edward Henry | *Dorchester, Mass.* |
| Gilbert Williams Hodges | *Foxboro, Mass.* |
| Arnold Smith Hoffman | *Barrington* |
| Robert Stow Holding | *Lewiston, Me.* |
| Edward Joseph Horrigan | *Providence* |
| Herbert Elliott Ingalls | *Lynn, Mass.* |
| Reber Nettleton Johnson | *Chicago, Ill.* |
| Thomas Leo Keily | *Providence* |
| Irving Angell King | *Providence* |
| Chester Lewis Knowles | *Narragansett Pier* |
| Allan Lincoln Langley | *Newport* |
| Jean Martial Legris | *Arctic* |
| Robert Mendon Lord | *Providence* |
| Fred Lynn Loucks | *Le Roy, N. Y.* |
| Ralph Baker Low | *Essex, Mass.* |
| Abraham Luber | *Providence* |
| Elmer George MacDowell | *Linwood, N. Y.* |
| Frank Edward McDuff | *Pawtucket* |
| James Joseph McGovern | *Providence* |
| Raymond C. McKay | *Youngstown, Ohio* |
| Edward Aloysius McLaughlin | *Providence* |
| Kenneth Oliver Mason | *Pawtucket* |
| Melville Carlos Mason | *Rupert, Vt.* |
| Percy Davol Meader | *Providence* |
| Herbert Earl Morgan Medbury | *Providence* |
| Lawrence Carl Thompson Miller | *Taunton, Mass.* |
| Robert Ewing Mitchell | *Providence* |
| William Anthony Moffett | *Schenectady, N. Y.* |
| Nahum Morrill | *Chicago, Ill.* |
| Halsey Reginald Nash | *South Weymouth, Mass.* |
| Joseph George Nathanson | *Central Falls* |
| William Henry Oslin | *Providence* |
| Edmund Selinger Parsons | *Providence* |
| Stephen Jefferson Patten | *Brooklyn, N. Y.* |

| NAME | RESIDENCE |
|---|---|
| Howard Randolph Perrin | *Pawtucket* |
| Wilber John Phillips | *Youngstown, Ohio* |
| Reginald Poland | *Providence* |
| Francis Whitfield Post | *Brockton, Mass.* |
| Raymond Abner Preston | *Danielson, Ct.* |
| Albert Weber Protheroe | *Port Chester, N. Y.* |
| Arthur Forest Ranger | *Providence* |
| Henry Philip Reynolds | *Uxbridge, Mass.* |
| Harold Alton Rice | *Leominster, Mass.* |
| James Everett Ricker | *Providence* |
| Morgan Witter Rogers | *Providence* |
| George Emil Ronne | *Providence* |
| Stanley James Rowland | *Shelburne Falls, Mass.* |
| Harry John Rubin | *Providence* |
| Leon Beckwith Savacool | *Manchester, N. H.* |
| Melvin Eugene Sawin | *Providence* |
| James Ira Shepard | *Providence* |
| Carleton Fenner Sims | *Warwick Neck* |
| Cyril Carpenter Smith | *Seekonk, Mass.* |
| Edson Kirk Smith | *Alliance, Ohio* |
| Henry Robert Smith | *Rutland, Mass.* |
| Raymond Leonard Smith | *Newark, N. J.* |
| John Lovell Sperry | *Oak Lawn* |
| Leroy Arnold Spooner | *Eden Park* |
| Harold Hardy Sprague | *Melrose, Mass.* |
| Walter Hoff Sprague | *Pottersville, Mass.* |
| William Francis Tewhill | *Florence, Mass.* |
| James Joseph Tyrrell | *Pawtucket* |
| Eli Morril Viner | *Providence* |
| Moses Allyn Wadhams | *Bloomfield, Ct.* |
| Cyril Horace Wakefield | *Providence* |
| Earl Hammond Walker | *Providence* |
| Ward Wetmore | *Essex, Mass.* |
| Norman Hale Whitehead | *Somerset, Mass.* |
| Theodore Peters Whittemore | *West Roxbury, Mass.* |
| Francis Merrill Willett | *Brockton, Mass.* |
| Roger Williams | *Providence* |
| Maurice Augustus Wolf | *Rochester, N. Y.* |
| Norris Elwin Woodbury | *Nashua, N. H.* |
| Charles Lester Woolley | *Providence* |
| Sidney Waddington Wray | *Providence* |
| Ernest Elwood Yeaton | *Chelsea, Me.* |

## SOPHOMORES: CLASS OF 1915

| NAME | RESIDENCE |
|---|---|
| John Blair Abbott | *St. Louis, Mo.* |
| Edgar Allen | *Edgewood* |
| Sewell Woodberry Allison | *Rehoboth, Mass.* |
| Carl Henry Angell | *Providence* |
| Alfred Wyatt Anthony | *Lewiston, Me.* |
| Percy Charles Babington | *Cranston* |
| Arthur Earl Barnard | *Providence* |
| Ismar Baruch | *New London, Ct.* |
| Russell Lowell Bateman | *Wilkinsburg, Pa.* |
| William Emmet Beehan | *Providence* |
| Ralph Leon Blanchard | *Pittsfield, Me.* |
| Harrison Bliss | *Providence* |
| George Fremont Bliven | *Providence* |
| Royal Buchanan Bongartz | *Providence* |
| Earl Allwood Bowen | *Providence* |
| Joseph Brown Bowen | *Pawtucket* |
| John Hanson Bower | *Methuen, Mass.* |
| Francis Chapin Breckenridge | *Providence* |
| Wilbur Tobias Breckenridge | *Providence* |
| Harry Danforth Brice | *Providence* |
| Oscar Anthony Brown | *West Kingston* |
| Sharon Osborn Brown | *Providence* |
| Ray Lawrence Burnell | *Westbrook, Me.* |
| Frederick Burns | *Winthrop, Mass.* |
| Luther Haven Burrill | *West Medway, Mass.* |
| William Russell Burwell | *Providence* |
| Edward Raymond Campbell | *Putney, Vt.* |
| Leonard Brown Campbell | *Providence* |
| John Rudolph Carlson | *Roslindale, Mass.* |
| Theodore Chandler | *Auburndale, Mass.* |
| Wilfred Warren Chandler | *Somerville, Mass.* |
| Byron Edwin Chapman | *Broadalbin, N. Y.* |
| Charles Myron Clegg | *Youngstown, Ohio* |
| Harold Jared Cone | *New London, Ct.* |
| Roland Edes Copeland | *Roxbury, Mass.* |
| Edward John Corcoran | *Newport* |
| Clarence Frederic Corp | *Providence* |
| Ralph Waldo Cram | *Melrose, Mass.* |
| Frank Bennett Crocker | *Le Roy, N. Y.* |
| William Clinton Crolius, Jr. | *Denver, Col.* |
| Cecil Merne Putnam Cross | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Minot Jay Crowell | *Melrose, Mass.* |
| Percy Raymond Crum | *Poughkeepsie, N. Y.* |
| Shirley Everett Culver | *Attleboro, Mass.* |
| Paul Oliver Curtis | *Dorchester, Mass.* |
| Frederick Davis | *Montclair, N. J.* |
| Harvey Gladding Denham | *South Attleboro, Mass.* |
| Willis Day Donnan | *Le Roy, N. Y.* |
| Henry Forrester Drake | *Brooklyn, N. Y.* |
| John Albert Droege, Jr. | *Providence* |
| Norman Le Roy Duncan | *Woburn, Mass.* |
| MacDonald Edinger | *Kingston, N. Y.* |
| Wilmer Hughes Eicke | *Narragansett Pier* |
| Ernest Hartwell Emery | *North Kingstown* |
| Harry Elmer Emmons, Jr. | *Brunswick, Me.* |
| Carl De Witt Everingham | *Suncook, N. H.* |
| Gordon Banham Ewing | *Newton Centre, Mass.* |
| Eliot Harold Falk | *Meriden, Ct.* |
| Amatus Edward Feeney | *Providence* |
| Franklin Blaine Frost | *Tiverton* |
| Raymond Bissett Gallant | *Exeter, N. H.* |
| Wallace Lester Gallup | *Springfield, Mass.* |
| John Lindley Gammell | *Providence* |
| Wallace Allyn Gannon | *Newark, N. J.* |
| Aaron Elmer Gottshall | *Bluffton, Ohio* |
| Joseph Gottstein | *Seattle, Wash.* |
| Ralph Brown Graham | *Lynn, Mass.* |
| Frederick Hartwell Greene | *Newton Centre, Mass.* |
| John Hermon Greene, Jr. | *Newport* |
| Joseph Irving Greene | *Fishkill-on-Hudson, N. Y.* |
| Albert Leonard Grindy | *North Adams, Mass.* |
| Clarence James Grinnell | *Newport* |
| Walter Pontius Gunn | *Springfield, Mass.* |
| John Russell Haire | *Newport* |
| Lawrence Hall | *Providence* |
| Herman Nichols Harcourt | *Wappingers Falls, N. Y.* |
| John Eugene Hart | *Far Hills, N. J.* |
| Morgan Bulkeley Haven | *New London, Ct.* |
| Schuyler Victor Hayward | *Chicago, Ill.* |
| George Earl Hebner | *Le Roy, N. Y.* |
| Paul Palmer Henson | *Brooklyn, N. Y.* |
| Prescott William Hill | *Providence* |
| Edward Winslow Hincks | *Providence* |
| Raymond Canfield Hopkins | *Shannock* |

| NAME | RESIDENCE |
|---|---|
| Dana Mortimer Hubbard | *Woburn, Mass.* |
| Frederic Johnson Hunt | *East Providence* |
| Harley Clifford Hyde | *Cranston* |
| Harold Mitchell Jackson | *Brockton, Mass.* |
| John Leslie Jenney | *Pawtucket* |
| Philip Sturtevant Kellen | *Boston, Mass.* |
| John Edward Kelly | *Le Roy, N. Y.* |
| Paul Joseph Kingsley | *Providence* |
| Harold Clarence Kinne | *Pawtucket* |
| Clarence Joseph Lamb | *Pawtucket* |
| Howard Langley | *Newport* |
| George Henry Anthony La Roe | *Providence* |
| Herbert Austin Larrabee | *Peabody, Mass.* |
| Leslie Torrence Little | *Picture Rocks, Pa.* |
| William Fowler Littlejohn | *Barre, Vt.* |
| Edward Carleton Loud | *South Weymouth, Mass.* |
| Earl Francis Luther | *East Providence* |
| Harvey Bullinger McCrone | *St. Johnsville, N. Y.* |
| Rowland Hazard McLaughlin | *Chicago, Ill.* |
| Richard Lambie McLean | *Boston, Mass.* |
| Colin Gordon McLeod | *Providence* |
| Arthur Michelini | *Reading, Mass.* |
| Fred William Miller | *Ivoryton, Ct.* |
| Joseph Miller | *Narragansett Pier* |
| Harold Cranston Miner | *East Greenwich* |
| Seth Kimball Mitchell | *Bradford, Mass.* |
| Harold Leslie Myers | *Morristown, N. J.* |
| William Arthur Needham | *Providence* |
| Hendrik Gabriel Nelson | *Providence* |
| Henry Schischker Newcombe | *Marlboro, Mass.* |
| Herbert Newell Nicholas | *Pawtucket* |
| John Henry Nolan | *Newport* |
| Warren Perham Norton | *Waymart, Pa.* |
| James Francis O'Donoghue | *Lowell, Mass.* |
| Benedict Max Olch | *Providence* |
| John Anthony Owen, Jr. | *Providence* |
| Lester Curtis Page | *Phenix* |
| George Thomas Paine | *Warwick* |
| Frank Anthony Parente | *Providence* |
| Roy Leon Parker | *Providence* |
| John Albert Weld Pearce | *New Bedford, Mass.* |
| Charles Stuart Phelps | *Rockland, Mass.* |
| Roy Cleveland Phillips | *Norwich, Ct.* |

| NAME | RESIDENCE |
|---|---|
| Charles Austin Piper | *Franklin, Me.* |
| Whiting Hayden Preston | *Providence* |
| Howard Lewis Quimby | *South Acton, Mass.* |
| Robert Emmet Quinn | *River Point* |
| Adams Thurber Rice | *Newton Centre, Mass.* |
| Richard Drury Rice | *Lynn, Mass.* |
| William Karl Rice | *Adams, N. Y.* |
| James Caviness Rickner | *Mancos, Col.* |
| Frederick John Rogers | *Providence* |
| Samuel Greene Arnold Rogers | *West Chester, Pa.* |
| Philip Carl Scherer, Jr. | *Brooklyn, N. Y.* |
| William Paine Sheffield, Jr. | *Newport* |
| Morris Siff | *St. Louis, Mo.* |
| George Silverman | *Providence* |
| John Joseph Skolnick | *New York, N. Y.* |
| Edgar Jonathan Staff | *Brockton, Mass.* |
| Richard Boardman Stanley | *Plymouth, N. H.* |
| Milton Hammond Stansbury | *West Chester, Pa.* |
| Elliot Shippen Staples | *Burlington, Vt.* |
| Gregory Harte Starbuck | *Gouverneur, N. Y.* |
| Wallace Gear Stewart | *East Orange, N. J.* |
| Roland Lucius Stickney | *Manchester, N. H.* |
| Raymond Parkhurst Stickney | *Manchester, N. H.* |
| Sherman Merrill Strong | *Chicago, Ill.* |
| Edmund James Sullivan | *Providence* |
| William Francis Sullivan | *Lowell, Mass.* |
| Louis Morenci Sweeny | *Poughkeepsie, N. Y.* |
| Elias Charles Sydney | *Providence* |
| Harold Murdock Taylor | *Meshanticut* |
| Parker Gillespie Tenney | *Minneapolis, Minn.* |
| Carl Anthony Terry | *Fall River, Mass.* |
| Harold Winthrop Tucker | *Providence* |
| George Clark Valentine | *Ballston Spa, N. Y.* |
| Homer Emsley Van Derwerken | *Middle Granville, N. Y.* |
| Edward Robert Walsh, Jr. | *Roslindale, Mass.* |
| William Gordon Ward | *Attleboro, Mass.* |
| George Willis Waterman | *Providence* |
| William Randall Waterman | *Providence* |
| Harold Earle Watson | *Cranston* |
| Byron Lillibridge West | *Edgewood* |
| Harold Leslie Wilson | *Youngstown, Ohio* |
| Russell Mills Wilson | *Providence* |
| Edward Harrison Winsor | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Samuel Henry Workman | *Providence* |
| Leonard Marshall Wright | *Cambridge, Mass.* |

## FRESHMEN: CLASS OF 1916

| | |
|---|---|
| Maurice Adelman | *Providence* |
| William Russell Affleck | *Yonkers, N. Y.* |
| Arvid Axel Alm | *Peabody, Mass.* |
| Harold Patterson Andrews | *Providence* |
| George Ralph Arnold | *Providence* |
| Jesse Mitchell Bailey | *Southbury, Ct.* |
| Frederick Allan Ballou, Jr. | *Providence* |
| Richard Davis Banigan | *Providence* |
| Thompson Mulford Barker | *Morristown, N. J.* |
| Harold Chester Barney | *East Providence* |
| Louis Earl Bauer | *Linwood, N. Y.* |
| George Stacy Bearse | *Dorchester, Mass.* |
| Samuel Benjamin | *Providence* |
| Edward Warren Blue | *Newton, Mass.* |
| John Morton Booth | *Fall River, Mass.* |
| Elliot Harris Bosworth | *Chicopee Falls, Mass.* |
| Reginald Odiorne Brackett | *Brookline, Mass.* |
| Robert Elmer Briggs | *Norwich, Ct.* |
| John Roy Brokenshire | *Pawtucket* |
| Leon William Brower | *Providence* |
| Joseph Richard Brown | *Provincetown, Mass.* |
| Abraham Jacob Burt | *Providence* |
| Harry Hunter Burton | *New Bedford, Mass.* |
| Nathan Benedict Burton | *Woodbury, Ct.* |
| Howard Seibert Butterweck | *Allentown, Pa.* |
| Seward Trover Byam | *North Adams, Mass.* |
| George Joseph Aloysius Cairns | *Providence* |
| Edward Robert Casey | *Brockton, Mass.* |
| John Joseph Cashman | *Providence* |
| Thomas Hodges Caswell | *Norton, Mass.* |
| William Curtis Chase | *Providence* |
| William James Clark | *Newark, N. J.* |
| Sidney Clifford | *Providence* |
| Henry Leon Cohen | *Providence* |
| John Stuart Coleman | *Providence* |
| Albert Bullock Coop | *Providence* |
| Edmond Patrick Corcoran | *Rockville, Ct.* |
| Joseph Merritt Couse | *Asbury Park, N. J.* |

| NAME | RESIDENCE |
|---|---|
| Edward Ingersoll Cristy | *Providence* |
| George Burton Cumerford | *Providence* |
| Charles Wesley Goddard Currier | *Newton, Mass.* |
| Gerald Dwight Curtis | *Warwick Neck* |
| Elmer Freman Davenport | *Shelburne Falls, Mass.* |
| Herman Mantell Davis | *Providence* |
| William Heisel Dick | *New Bedford, Mass.* |
| Thomas Henry Donahue, Jr. | *Providence* |
| Richard Dresser | *Providence* |
| John Bernard Dunn | *Providence* |
| Francis Michael Dwyer | *Providence* |
| George Arthur Eames | *Morristown, N. J.* |
| Harold Thomas Eaton | *Stonington, Ct.* |
| Edwin Eayrs | *Providence* |
| John Lamson Eddy | *Providence* |
| Claus Emanuel Ekstrom | *Providence* |
| Stanley Smith Emery | *North Kingstown* |
| Albert Edwin Evans | *Poultney, Vt.* |
| Arthur Fairchild | *Newtown, Ct.* |
| Horace Janney Farlee | *Lambertville, N. J.* |
| Frank Alexander Farnham, 2d | *Providence* |
| Philip Aaron Feiner | *Providence* |
| Herman Feinstein | *Providence* |
| Willard Ferguson | *Burlington, Vt.* |
| Frederick Lum Ferris | *East Orange, N. J.* |
| Charles Curtis Field | *Exeter, N. H.* |
| Theodore Richard Ford | *Morristown, N. J.* |
| Joseph Edward Foy | *Pawtucket* |
| Joseph Joaquim Fraga | *Providence* |
| John Henry Ghodey | *Providence* |
| Abraham Glichouse | *Newark, N. J.* |
| Phillip Paddock Goodwill | *Bramwell, W. Va.* |
| William Augustus Graham | *Providence* |
| Max Thomas Green | *Everett, Mass.* |
| Lucius Knowlton Hale | *Monson, Mass.* |
| Harold Hall | *Hackettstown, N. J.* |
| Ernest Halliwell | *Fall River, Mass.* |
| Joseph Francis Halloran | *Fall River, Mass.* |
| Clifford Sherman Hathaway | *Peace Dale* |
| Walter Sumner Hayward | *Rochester, N. Y.* |
| John Clark Hazlett | *Bloomington, Ill.* |
| Francis Carmody Healey | *Cuba, N. Y.* |
| Clifford Davenport Heathcote | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Charles James Hill | *Syracuse, N. Y.* |
| Ployer Peter Hill | *Newburyport, Mass.* |
| Gustave Desiré Houtmann | *Manville* |
| Thomas Mayno Hull | *Providence* |
| William Henry Hurlin | *Antrim, N. H.* |
| William Ingles | *Courtright, Ont., Can.* |
| Willis Hobson Jeffery | *Providence* |
| George Franklin Johnston | *Long Branch, N. J.* |
| Harley Joslin | *Media, Pa.* |
| Edward Lawrence Kehoe | *Naugatuck, Ct.* |
| Hugo Alden Kenyon | *West Barrington* |
| Lewis Clifford Kenyon | *Providence* |
| Thomas Bartholomae Keville | *Providence* |
| Charles Russell Kinney | *Norwich, Ct.* |
| Joseph Aubrey Landschoof | *Dunkirk, N. Y.* |
| Newton Peckham Leonard | *Providence* |
| Vincent Washburn Leonard | *Fairhaven, Mass.* |
| Victor Le Valley | *Long Branch, N. J.* |
| Charles Alick Levin | *Norwich, Ct.* |
| Herbert Royal Lindblom | *Providence* |
| Harold Spencer Litchfield | *Auburn* |
| Tsung Fah Liu | *Tientsin, China* |
| Harold Irving Long | *Sharon, Mass.* |
| Myer Joseph Lozovitsky | *Providence* |
| Burton Loren Lucas | *Rumford* |
| Stanley Howard Lyons | *Providence* |
| William Rhodes McBee | *Providence* |
| James Joseph McGinn | *Providence* |
| Charles Berger MacKay | *Providence* |
| Allen Goodwin McKinnon | *Manchester, Mass.* |
| Fred McLean | *Youngstown, Ohio* |
| Hugh Stanford McLeod | *Providence* |
| Morton Perry McLeod | *Lafayette* |
| Steward Tilton MacNeill | *West Newton, Mass.* |
| Roger Laurence Marble | *Brockton, Mass.* |
| Ernest Tremont Mattison | *Edgewood* |
| Allen Guy Maxwell | *Slatington, Pa.* |
| Harold Madison Messer | *Newbury, N. H.* |
| Paul Barney Metcalf | *Wickford* |
| Herman Michelson | *New York, N. Y.* |
| David Johnston Miller | *Central Falls* |
| John Wesley Moore | *Fall River, Mass.* |
| Daniel Lee Morrissey | *Bristol* |

| NAME | RESIDENCE |
|---|---|
| Wilfred Murch | *Providence* |
| Joseph Donald Murphy | *Friendship, N. Y.* |
| David Wilson Neill | *Bernardsville, N. J.* |
| Francis Joseph O'Brien | *Providence* |
| William Slocum O'Gorman | *Providence* |
| William Nicholas Ormsby | *Dorchester, Mass.* |
| Milton Coburn Paige | *Dorchester, Mass.* |
| Frank Eugene Paine, Jr. | *Warwick* |
| John Pitkins Palmer | *Stockbridge, Mass.* |
| Everett Granville Perkins | *Newburyport, Mass.* |
| Clayton Leroy Phillips | *New Haven, Ct.* |
| Ralph Williams Pratt | *Newton Centre, Mass.* |
| Russell Billings Quimby | *South Acton, Mass.* |
| Vernon Rice | *Williamsport, Pa.* |
| Wayland Wilbur Rice | *Providence* |
| John Joseph Riley | *New Bedford, Mass.* |
| Emery Roller | *Seligman, Mo.* |
| Francis Willard Rollins | *Barnard, Vt.* |
| Jacob Rosenberg | *Fall River, Mass.* |
| Richard Wilmer Rowan | *Asbury Park, N. J.* |
| Walter Ewan Rowland | *Youngstown, Ohio* |
| Le Roy Sumner Rowley | *Middletown, N. Y.* |
| Paul Lewis Russell | *White Plains, N. Y.* |
| Carlo Canio Russo | *San Fele, Italy* |
| John Alexander Ryrie | *Alton, Ill.* |
| Earl Duckworth Sanford | *Providence* |
| Percy Waterman Sarle | *Providence* |
| Wilbour Eddy Saunders | *Providence* |
| Pierre Paul Saunier | *Worcester, Mass.* |
| Harold George Saxton | *Brockton, Mass.* |
| Earle Winslow Schoonmaker | *Newark, N. J.* |
| Harold Duel Scott | *Granville, N. Y.* |
| Orrin Shepard | *Le Roy, N. Y.* |
| Abraham Shoul | *Newburyport, Mass.* |
| Abraham William Sidkowsky | *Providence* |
| Paul Foster Sinclair | *Johnson, Vt.* |
| James Edward Skane | *Providence* |
| Franklin Chapman Smith | *Westerly* |
| Frederick Lee Smith, Jr. | *Providence* |
| Frank Russell Smith | *Norwich, Ct.* |
| Wilbur John Snyder | *Buzzards Bay, Mass.* |
| Frank Elmer Starrett | *Athol, Mass.* |
| David Steel | *Auburn* |

| NAME | RESIDENCE |
|---|---|
| Edward Steinhauser | *Philadelphia, N. Y.* |
| Joseph Laycock Strickland | *Lawrence, Mass.* |
| William Francis Sullivan, 2d | *Wellesley Hills, Mass.* |
| Paul Nichols Swaffield | *Lawrence, Mass.* |
| William Gorham Thurber | *Providence* |
| Harry Weeden Underwood | *Narragansett Pier* |
| George Unger | *Richmond Hill, N. Y.* |
| James Mark Wade | *Trenton, Tenn.* |
| Howard Burt Webb | *Gouverneur, N. Y.* |
| Guy William Wells | *Montrose, Pa.* |
| John Frederick Wendt | *Providence* |
| George Morrill White | *Providence* |
| Irving Clough White | *Lynn, Mass.* |
| Donald Lyon Whittemore | *West Roxbury, Mass.* |
| Theodore Williams | *Providence* |
| Amasa Fitch Williston | *Tiverton* |
| Edward Talpey Willson, Jr. | *Farmington, N. H.* |
| William Richard Wirtner | *Dunkirk, N. Y.* |
| Henry Parker Witte | *Morristown, N. J.* |
| Earl Franklin Wood | *Danielson, Ct.* |
| George Henry Wood | *Pawtucket* |
| Stuart Edsall Yeakel | *East Orange, N. J.* |
| William Levett Yeaton | *Hoboken, N. J.* |
| William Howard Young | *Providence* |

## SPECIAL STUDENTS

| | |
|---|---|
| Cyrus Gates Allen | *Denver, Col.* |
| Stanley Mirick Banfield | *Worcester, Mass.* |
| Henry Dewees Cady | *Warren* |
| William Rose Champlin | *Providence* |
| Allen Hay Chatterton | *Pawtucket* |
| Shiang-fuan Fay | *Tientsin, China* |
| George Willard Furey | *Providence* |
| Russell Elliott Goff | *Providence* |
| Irving Turgle Gumb | *Lowell, Mass.* |
| Willard Brayton Hall | *North Providence* |
| Samuel Paris Harris | *Providence* |
| Henry Blaine Kulp | *Pottstown, Pa.* |
| Joseph McCormick | *Providence* |
| Herbert William McKenzie | *Springfield, Mass.* |
| Albert Edward Mayoh | *Pawtucket* |
| Isaac Dwight Miner | *East Greenwich* |

| NAME | RESIDENCE |
|---|---|
| William Poland | *Providence* |
| Louis Frederic Robbins | *Ballston Spa, N. Y.* |
| William Martin Tilton | *Dalton, Mass.* |
| Peter Vasilieff | *Ekatevinosleff, Russia* |
| Robert McDonald Sterling Walker | *Providence* |

# THE WOMEN'S COLLEGE
## IN BROWN UNIVERSITY

. . .

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† WILLIAM HERBERT PERRY FAUNCE, D.D., LL.D., PRESIDENT
*Professor of Moral and Intellectual Philosophy*

WALTER GOODNOW EVERETT, PH.D., ACTING PRESIDENT
*Professor of Philosophy and Natural Theology*

LIDA SHAW KING, A.M., LITT.D., DEAN OF THE WOMEN'S COLLEGE
*Professor of Classical Literature and Archaeology*

EMMA BRADFORD STANTON, A.M., REGISTRAR OF THE WOMEN'S COLLEGE

. . .

JOHN HOWARD APPLETON, A.M., SC.D.
*Newport-Rogers Professor of Chemistry*

WILLIAM CAREY POLAND, A.M., LITT.D.
*Professor of the History of Art; Director of the Museum of Fine Arts*

NATHANIEL FRENCH DAVIS, A.M., LL.D.
*Professor of Pure Mathematics*

WINSLOW UPTON, A.M., SC.D.
*Professor of Astronomy; Director of the Ladd Observatory*

ALBERT GRANGER HARKNESS, A.M., LITT.D.
*Professor of Roman Literature and History*

HENRY BRAYTON GARDNER, PH.D.
*Professor of Economics*

COURTNEY LANGDON, A.B.
*Professor of the Romance Languages and Literatures*

EDMUND BURKE DELABARRE, PH.D.
*Professor of Psychology*

†JAMES IRVING MANATT, PH.D., LL.D.
*Professor of Greek Literature and History*

WALTER COCHRANE BRONSON, A.M., LITT.D.
*Professor of English Literature*

† On leave of absence during the academic year 1912–13.

ASA CLINTON CROWELL, PH.D.
*Associate Professor of the Germanic Languages and Literatures*

CARL BARUS, PH.D., LL.D.
*Dean of the Graduate Department; Hazard Professor of Physics*

FRANCIS GREENLEAF ALLINSON, PH.D.
*David Benedict Professor of Classical Philology*

HENRY PARKER MANNING, PH.D.
*Associate Professor of Pure Mathematics*

JAMES QUAYLE DEALEY, PH.D.
*Professor of Social and Political Science*

WALTER BALLOU JACOBS, A.M.
*Professor of Education*

ALBERT DAVIS MEAD, PH.D., SC.D.
*Professor of Biology*

ALBERT KNIGHT POTTER, A.M.
*Associate Professor of the English Language*

ALBERT BUSHNELL JOHNSON, A.M.
*Associate Professor of the Romance Languages*

JOHN FRANCIS GREENE, A.M.
*Associate Professor of Roman Literature and History*

WILLIAM MACDONALD, PH.D., LL.D.
*George L. Littlefield Professor of American History*

JOHN EMERY BUCHER, PH.D.
*Associate Professor of Organic Chemistry*

† HENRY THATCHER FOWLER, PH.D.
*Professor of Biblical Literature and History*

† LINDSAY TODD DAMON, A.B.
*Professor of English Literature and Rhetoric*

GEORGE WYLLYS BENEDICT, PH.D.
*Associate Professor of English*

THOMAS CROSBY, A.M.
*Associate Professor of English and Public Speaking*

HENRY BARRETT HUNTINGTON, A.B.
*Associate Professor of English*

† CAMILLO VON KLENZE, PH.D.
*Professor of the Germanic Languages and Literatures*

CHARLES WILSON BROWN, A.M.
*Assistant Professor of Geology*

† On leave of absence during the academic year 1912–13.

HERBERT EUGENE WALTER, PH.D.
*Assistant Professor of Biology*

ROLAND GEORGE DWIGHT RICHARDSON, PH.D.
*Associate Professor of Pure Mathematics*

JAMES MARVIN MOTLEY, PH.D.
*Associate Professor of Economics*

CHARLES HERMAN HUNKINS, DR. UNIV. PARIS
*Assistant Professor of the Romance Languages and Literatures*

RAYMOND CLARE ARCHIBALD, PH.D.
*Assistant Professor of Pure Mathematics*

THEODORE FRELINGHUYSEN COLLIER, PH.D.
*Associate Professor of European History*

HARLAN HARVEY YORK, PH.D.
*Assistant Professor of Botany*

WILLIAM THOMSON HASTINGS, A.M.
*Assistant Professor of English*

JOHN CORLISS DUNNING, PH.D.
*Assistant Professor of Political Science*

STEPHEN SHELDON COLVIN, PH.D.
*Professor of Educational Psychology*

ALFRED HARRISON JONES, PH.D.
*Assistant Professor of Logic*

GLANVILLE TERRELL, PH.D.
*Acting Professor of Greek Literature and History*

EARLE BENNETT CROSS, PH.D.
*Acting Assistant Professor of Biblical Literature and History*

HAMILTON CRAWFORD MACDOUGALL, MUS.D.
*Lecturer in Music*

ALICE WILSON WILCOX, A.M.
*Instructor in Physiology and Household Economics in the Women's College*

ROBERT McBURNEY MITCHELL, A.B.
*Instructor in German*

STANLEY BATES HARKNESS, A.B.
*Instructor in English*

JOHN HERBERT BACHMANN, A.M.
*Instructor in German*

NORMAN EDWARD HOLT, A.B., SC.M.
*Instructor in Chemistry*

LAURENCE RICH GROSE, A.M.
*Instructor in English*

BERNARD ALOYSIUS KEENAN, A.B.
*Instructor in German and French*

ALBERT EDWARD RAND, A.M.
*Instructor in German*

HENRI FERDINAND MICOLEAU
*Instructor in French*

SARAH GRIDLEY ROSS, A.B.
*Hall Mistress, Miller Hall*

## COMMITTEE ON THE CURRICULUM

*Professors* POLAND, DAVIS, GARDNER, LANGDON, BRONSON, EVERETT, ALLINSON, MEAD, *and* MACDONALD, *Dean* KING.

## EXECUTIVE COMMITTEE

*President* FAUNCE, *Dean* KING, ROBERT HALE IVES GODDARD, *Rev.* HENRY MELVILLE KING, STEPHEN OLNEY METCALF.

## ADVISORY COUNCIL

*Miss* SARAH E. DOYLE, *Miss* AMELIA S. KNIGHT, *Mrs.* GUSTAV RADEKE, *Mrs.* CARL BARUS, *Mrs.* FRANCIS G. ALLINSON, *Miss* MARTHA W. WATT, *Mrs.* WILLIAM T. HASTINGS.

# COURSES OF INSTRUCTION

*COURSES designated by a † are given at the University; women are admitted to them, but only on the recommendation of the Dean of the Women's College. Women may also be admitted to some other University courses not announced here, with the special permission of the department and with the consent of the Dean of the Women's College. In courses designated by a * a final mark covering the work of the course as a whole is given at the end of the course, the mark given at the end of the first semester being regarded as temporary.*

*With the exception of Biology 1, 2, Greek Literature and History 20, and Roman Literature and History 3, courses offered to women are identical with corresponding courses offered to men. Detailed information may be found on pages 81–149. The officers of instruction are those conducting courses for men also, with the addition of:*

LIDA SHAW KING, A.M., *Professor of Classical Literature and Archaeology*

ALICE WILSON WILCOX, A.M., *Instructor in Biology*

## ART

1, 2. *History of Art from Antiquity through the Renaissance*
*Professor* POLAND.
*Tu., Wed., Sat., at 9.25.*

[3, 4. *Modern Art, and Theory and Criticism of the Fine Arts*]
Not offered in 1912–13.

15,* 16.* *Freehand Drawing*
Given at the Rhode Island School of Design. Hours to be arranged with the Director.

17,* 18.* *Advanced Drawing and Color Work*
Given at the Rhode Island School of Design. *Mon., Tu., Wed., at 2.*

19,* 20.* *Architectural Design*
Given at the Rhode Island School of Design. *Mon. at 3.* Drawing hours to be arranged with the Director.

## ASTRONOMY

1, 2. *General Course*
*Professor* UPTON.
*Wed., Fri., Sat., at 11.25.*

7, 8.† *Advanced Astronomy*

## BIBLICAL LITERATURE AND HISTORY

1, 2.† *Elementary Hebrew*

[11, 12.† *Gospels and Epistles*]
Not offered in 1912–13.

13, 14.† *Acts and Pauline Epistles*

15, 16. *Old Testament Literature and History*
*Professor* FOWLER. [This year *Professor* CROSS.]
*Tu., Wed., Sat., at 9.25.*

[17, 18. *New Testament Literature and History*]
Not offered in 1912–13.

[19, 20. *The English Bible as Literature*]
Not offered in 1912–13.

21, 22.*† *Biblical Seminary*

## BIOLOGY

1, 2. *General Biology*
Miss WILCOX.
*Tu., Wed., Sat., at 9.25.*

3, 4.† *Comparative Anatomy of Vertebrates*

5, 6.† *Anatomy of the Nervous System*

7, 8.† *Embryology and Histology*

9, 10.† *Advanced Histology and Pathology*

11, 12.† *General Physiology*

13, 14.† *Chemical Physiology*

16.† *Bacteriology*

17, 18.† *Advanced Bacteriology*

19.† *Invertebrate Zoölogy*

20. *Ornithology*
*Professor* WALTER.
Second semester.

24.† *Physiology*

[51, 52. *Applied Biology*]
Not offered in 1912–13.

## BOTANY

1, 2. *General Course*
*Professor* YORK.
*Tu., Wed., Sat., at 9.25.*

3, 4.† *Physiological Anatomy*

[5, 6.† *Comparative Morphology*]
Not offered in 1912–13.

7, 8.† *Advanced Course*

11, 12.† *Physiology*

## CHEMISTRY

1, 2. *Descriptive Chemistry*
*Professor* BUCHER *and Mr.* HOLT.
*Tu., Th., Sat., at 12.25.*

3, 4.† *Qualitative and Quantitative Analysis*

5, 6.† *Quantitative Analysis, Advanced Course*

7, 8.† *Organic Chemistry*

10.† *Assaying*

12.† *Organic Dyes*

[15, 16.† *Physical Chemistry*]
Not offered in 1912–13.

20.† *Inorganic Chemistry, Advanced Course*

21, 22.† *Organic Preparations, Advanced Course*

23, 24.† *Inorganic Preparations, Advanced Course*

27, 28.† *Conference on Special Topics in Chemistry*

29, 30.† *Conference on Special Topics in Chemistry*

## ECONOMICS

1. *Elementary Economics*
*Professor* MOTLEY.
First semester. Followed in the second semester by Social and Political Science 1. *Tu., Th., Sat., at 12.25.*

[5, 6.† *Money and Banking*]
Not offered in 1912–13.

[7. *Socialism and Labor Problems*]
Not offered in 1912–13.

10.† *Tariff, Reciprocity, and Shipping Subsidies*

11, 12.† *Public Finance and Financial History*

13.† *Statistics*

14.† *Accounting*

15.† *Trade and Transportation*

16.† *Corporations and Corporation Finance*

21, 22.† *Investigation of Special Topics*

23, 24.† *Economic Seminary*

## EDUCATION

1. *History of Education*
*Professor* JACOBS.
First semester. *Mon., Wed., Th., at 10.25.*

2. *Principles of Education*
*Professor* JACOBS.
Second semester. *Mon., Wed., Th., at 10.25.*

3. *Psychology of Education*
*Professor* COLVIN.
First semester. *Mon., Th., Fri., at 9.25.*

4. *Practical Introduction to Teaching*
*Professor* COLVIN.
Second semester. *Mon., Th., Fri., at 9.25.*

## ENGLISH

1. *Rhetoric and Composition*
*Professor* W. T. HASTINGS, *Messrs.* HARKNESS *and* GROSE.
First semester. *1st div., Mon., Th., Fri., at 9.25; 2d div., Tu., Wed., Sat., at 9.25.*

48. *English Literature from the Beginning to 1798*
*Professor* HASTINGS, *Mr.* HARKNESS.
Second semester. *1st div., Mon., Th., Fri., at 9.25; 2d div., Tu., Wed., Sat., at 9.25.*

[5, 6. *English Composition, Advanced Course*]
Not offered in 1912–13.

7, 8. *Argumentative Composition*
*Professors* HUNTINGTON *and* HASTINGS.
*Wed., Fri., Sat., at 11.25.*

11, 12. *Public Speaking*
*Professor* CROSBY.
*Tu., Fri., Sat., at 10.25.*

15, 16.† *Old English*

17, 18. *Chaucer*
*Professor* POTTER.
*Tu., Th., Fri., at 3.20.*

[21, 22. *The Drama in England to 1642*]
Not offered in 1912–13.

[23. *The Modern English Drama*]
Not offered in 1912–13.

[25, 26. *Shakspere*]
Not offered in 1912–13.

27, 28. *Shakspere*
*Professor* POTTER.
*Tu., Th., Sat., at 12.25.*

31, 32. *English Literature from 1660 to 1798*
*Professor* HUNTINGTON.
*Mon., Th., Fri., at 9.25.*

35. *English Literature from 1798 to 1832, Poetry*
*Professor* BENEDICT.
First semester. *Tu., Wed., Sat., at 9.25.*

36. *English Literature from 1798 to 1832, Prose*
*Professor* BENEDICT.
Second semester. *Tu., Wed., Sat., at 9.25.*

37. *English Literature from 1832 to 1892, Prose*
*Professor* BRONSON.
First semester. *Tu., Th., Sat., at 12.25.*

38. *English Literature from 1832 to 1892, Poetry*
*Professor* BRONSON.
Second semester. *Tu., Th., Sat., at 12.25.*

[39, 40. *American Literature*]
Not offered in 1912–13.

[42. *Contemporary English and American Literature*]
Not offered in 1912–13.

43, 44.† *Seminary in English Literature*

## GEOLOGY

1. *General Geology*
*Professor* BROWN.
First semester. *Wed., Fri., Sat., at 11.25.*

6. *Economic Geography and Conservation*
*Professor* BROWN.
Second semester. *Wed., Fri., Sat., at 11.25.*

11, 12.† *Research in Geology and Geography*

## GERMANIC LANGUAGES AND LITERATURES

1, 2. *Elementary Course, First Year*
*Mr.* MITCHELL.
*Mon., Wed., Fri., at 12.25.*

3, 4. *Elementary Course, Second Year*
*Professor* CROWELL.
*Mon., Tu., Th., at 11.25.*

5, 6. *Intermediate Course*
*Mr.* KEENAN.
*Mon., Wed., Fri., at 12.25.*

7, 8. *Advanced Course in Standard Authors, Classical and Modern*
*Mr.* BACHMANN.
*Mon., Wed., Fri., at 12.25.*

9, 10.† *Modern Prose*

15, 16. *The German Drama of the Nineteenth Century*
*Mr.* RAND.
*Tu., Wed., Sat., at 9.25.*

17, 18.† *Lessing and Schiller*

[21, 22.† *Goethe's Faust: Parts* 1 *and* 2]
Not offered in 1912–13.

[25, 26.† *Outline History of German Literature*]
Not offered in 1912–13.

27, 28.† *German Literature in the Nineteenth Century*
*Mr.* MITCHELL.

31.† *Gothic*
*Professor* CROWELL.

32.† *Old High German*

[33.† *Old Norse*]
Not offered in 1912–13.

[34.† *Germanic Mythology*]
Not offered in 1912–13.

[35, 36.† *Middle High German*]
Not offered in 1912–13.

## GREEK LITERATURE AND HISTORY

A, B. *Elementary Course*
*Professor* TERRELL.
*Wed., Fri., Sat., at 11.25.*

1. *Homer and the Greek Anthology*
*Professor* MANATT. [This year *Professor* TERRELL.]
*Mon., Tu., Th., at 11.25.*

2. *Lysias and Plato*
*Professor* ALLINSON.
*Mon., Tu., Th., at 11.25.*

[3. *Lucian and the Dramatic Poets*]
Not offered in 1912–13.

[4. *The Historians*]
Not offered in 1912–13.

[5. *Epic Poetry*]
Not offered in 1912–13.

[6. *The Drama*]
Not offered in 1912–13.

7. *Lyric and Pastoral Poetry*
*Professor* MANATT. [This year *Professor* TERRELL.]
Second semester. *Tu., Fri., Sat., at 10.25.*

8. *Plato, Aristotle, and Aeschylus*
*Professor* ALLINSON.
First semester. *Tu., Fri., Sat., at 10.25.*

[9. *The Attic Orators*]
Not offered in 1912–13.

[10. *Lucian and Pausanias*]
Not offered in 1912–13.

15. *Greek Civilization*
*Professor* ALLINSON.
Second semester. *Wed., Fri., Sat., at 11.25.*

17, 18.† *Greek Seminary*

20. *Introduction to Greek Archaeology*
Outline of the remains of the earliest Greek civilization; an introductory study of Greek vases, coins, small bronzes, and terra-cotta figurines. Intended to give a general survey of these sources for Greek history and life. Illustrated lectures; collateral reading. *Professor* KING.
Three hours. Second semester. Elective for students who have completed one course in Latin or Greek. *Mon., Th., Fri., at 9.25.*

## HISTORY

1, 2. *Medieval and Modern History of Europe*
*Professor* MacDonald.
*Mon., Tu., Th., at 11.25.*

3.† *Early and Medieval Christianity*

4.† *The Reformation*

[5. *The French Revolution and the Napoleonic Era*]
Not offered in 1912–13.

[6. *Europe since 1815*]
Not offered in 1912–13.

7. *English History, 1066–1689*
*Professor* Collier.
First semester. *Mon., Tu., Th., at 11.25.*

8. *English History, 1689–1895*
*Professor* Collier.
Second semester. *Mon., Tu., Th., at 11.25.*

11, 12.† *Seminary in European History*

13, 14. *American History*
*Professor* MacDonald.
*Tu., Fri., Sat., at 10.25.*

[15, 16.† *Constitutional and Political History of the United States*]
Not offered in 1912–13.

17, 18.† *Seminary in American History*

19.† *Social History of America to 1800*

20.† *History of the United States since 1860*

## INDO-EUROPEAN PHILOLOGY

[2. *General Introduction to the Study of Language*]
Not offered in 1912–13.

## MATHEMATICS

1. *Solid and Spherical Geometry*
*Professors* MANNING *and* RICHARDSON.
First semester. *Tu., Fri., Sat., at 10.25.*

2. *Plane Trigonometry*
*Professors* MANNING *and* RICHARDSON.
Second semester. *Tu., Fri., Sat., at 10.25.*

[3. *Algebra*]
Not offered in 1912–13.

[4. *Algebra*]
Not offered in 1912–13.

5. *Plane Analytic Geometry*
*Professor* DAVIS.
First semester. *Mon., Wed., Th., at 10.25.*

6. *Differential Calculus*
*Professor* DAVIS.
Second semester. *Mon., Wed., Th., at 10.25.*

7, 8.† *Differential and Integral Calculus*

9.† *Differential Equations*

9 a.† *Differential Equations*

10.† *Differential Equations*

12.† *Modern Analytic Geometry*

[21, 22.† *Function Theory of a Complex Variable*]
Not offered in 1912–13.

25, 26.† *Advanced Algebra*

29, 30.† *Function Theory of a Real Variable*

43, 44. *Foundations, Methods, and Problems of Geometry*
*Professor* ARCHIBALD.
*Mon., Wed., Fri., at 12.25.*

## MUSIC

3. *Advanced Harmony*
*Professor* MACDOUGALL.
First semester. *Mon. at 11.25; Wed. at 1.45.*

4. *The Opera*
*Professor* MACDOUGALL.
Second semester. *Mon. at 11.25; Wed. at 1.45.*

## PHILOSOPHY

3. *Psychology*
*Professor* DELABARRE.
Through the year. *Tu., Th., Sat., at 12.25.*

4. *Ethics*
*Professor* JONES.
Second semester. Preceded by Philosophy 9. *Mon., Wed., Th., at 10.25.*

[7, 8. *History of Philosophy*]
Not offered in 1912–13.

9. *Philosophy of Religion*
*Professor* JONES.
First semester. To be followed by Philosophy 4. *Mon., Wed., Th., at 10.25.*

11, 12.† *Experimental Psychology, Introductory Laboratory Course*

[13, 14.† *Problems of Modern Philosophy*]
Not offered in 1912–13.

15, 16.† *Kantian and Post-Kantian Philosophy*

17, 18.† *Psychology, Advanced Course*

19, 20.† *Experimental Psychology, Advanced Laboratory Course*

20, 21.† *Advanced Ethics*

[23, 24.† *Philosophical Seminary*]
Not offered in 1912–13.

## PHYSICS

1, 2. *Elementary Physics*
*Mon., Tu., Th., at 11.25.*

3, 4.† *Elementary Physics, continued*

5, 6.† *Experimental Physics*

7, 8.† *Mathematical Treatment of Dynamical Problems*

9, 10.† *Mathematical Theory of Electricity and Magnetism*

11, 12.† *Advanced Laboratory Course*

13, 14.† *Applied Harmonic Analysis and Applied Vector Analysis*

15, 16.† *Physics, Advanced Course*

23, 24.† *Precision Measurements in Photometry, Electricity, and Magnetism*

25, 26.† *Radiation, Optics, and Heat*

## ROMAN LITERATURE AND HISTORY

1. *Livy*
*Professors* HARKNESS *and* GREENE.
First semester. *Mon., Tu., Th., at 2.25.*

2. *Cicero's Letters*
*Professor* GREENE.
Second semester. *Mon., Tu., Th., at 2.25.*

3. *Catullus and Vergil*
*Professor* KING.
First semester. *Mon., Th., Fri., at 9.25.*

4. *Horace's Satires, Juvenal*
*Professor* HARKNESS.
Second semester. *Tu., Fri., Sat., at 10.25.*

[5, 6. *Latin Poetry*]
Not offered in 1912–13.

7, 8. *Latin Prose*
*Professors* HARKNESS *and* GREENE.
*Tu., Th., Sat., at 12.25.*

11, 12. *Latin Composition*
*Professor* GREENE.
*Fri. at 2.25.*

16. *Roman Civilization*
*Professor* GREENE.
First semester. *Wed., Fri., Sat., at 11.25.*

## ROMANCE LANGUAGES AND LITERATURES

1, 2. *Elementary Course, First Year*
*Mr.* MICOLEAU.
*Mon., Wed., Th., at 10.25.*

5, 6. *Intermediate Course*
*Professor* HUNKINS.
*Mon., Wed., Th., at 10.25.*

7, 8. *Advanced Course*
*Professor* JOHNSON.
*Tu., Wed., Sat., at 9.25.*

[9, 10. *The Realistic School*]
Not offered in 1912–13.

11, 12. *The Romantic School*
*Professor* LANGDON.
*Tu., Wed., Sat., at 9.25.*

15, 16.† *Modern Spanish*

17, 18.† *Modern Italian*
*Professor* LANGDON.

19, 20. *Dante in English*
*Professor* LANGDON.
*Tu., Th., at 2.25; Sat. at 8.25.*

[21, 22.† *Spanish Language and Literature*]
Not offered in 1912–13.

23, 24. *Practice in Writing and Speaking French*
*Professor* JOHNSON.
*Mon., Wed., Th., at 10.25.*

## SOCIAL AND POLITICAL SCIENCE

### SOCIAL SCIENCE

1. *Elementary Social and Political Science*
*Professor* DEALEY.
Preceded by Economics 1. Second semester. *Tu., Th., Sat., at 12.25.*

3, 4. *Social Problems and Conditions*
*Professor* DEALEY.
*Wed., Fri., Sat., at 11.25.*

7.† *Sociology as a Science*
First semester.

8.† *Application of Sociological Principles*
Second semester.

9, 10.† *Sociological Aspects of Education*

11, 12.† *Sociological Theories*

13, 14.† *Investigation of Special Topics*

### POLITICAL SCIENCE

1. *Elementary Political and Social Science*
*See* Social Science 1.

3, 4. *Government and Politics of the United States*
*Dr.* DUNNING.
*Tu., Fri., Sat., at 10.25.*

11, 12.† *Current Social and Political Theory and Practice*

## HYGIENE AND PHYSICAL EDUCATION

M. Elizabeth Bates, *Instructor*

From Thanksgiving until the Spring recess, all first and second year students are required to attend classes in the gymnasium three times a week. Seniors and Juniors may take elective work. All students are carefully examined before exercise is assigned.

Freshman Class. Gymnastics, games, dancing, and conferences in practical hygiene. Three hours. *Mon., Tu., Th., 3.25 to 4.10.*

Sophomore Class. Gymnastics, games, dancing, and conferences in practical hygiene. More advanced than Freshman work. Three hours. *Mon., Tu., Th., 2.30 to 3.15.*

A class in light gymnastics, games, and dancing will be held for students who, because of their organic condition, or of temporary disability, are unable to take the regular class work.

Special remedial work, of a functional nature, will be given to students who have round shoulders, lateral curvature, or flat foot.

Seniors and Juniors may elect one, two, or three hours a week.

A course will be given in play, games, and folk dances suitable for elementary schools, playgrounds, and social settlements. One hour. Elective for Seniors and Juniors.

Students who are not able to take the required exercise in the gymnasium will be assigned to the rest room as a substitute. They will also do prescribed reading in hygiene and have conferences in hygiene with the instructor.

All students are offered basket ball, tennis, and bowling under the supervision of the instructor.

## ORGANIZATION OF THE WOMEN'S COLLEGE‡

INSTRUCTION for undergraduate women § is provided by a department of the University known as The Women's College in Brown University. The aim of the Women's College is to offer to all properly prepared women the same examinations, the same courses of study under the same teachers, and the same degrees that the University offers to men, but to preserve the distinct social life of a separate college.

The Corporation of the University has supervision and control of the Women's College as of other departments of the University, and for this purpose appoints

‡ Bulletins of the Women's College may be obtained from the Registrar, The Women's College in Brown University, Providence, R. I. For information not contained in this Catalogue or in the Bulletins, apply to the Dean of the Women's College, Pembroke Hall, Providence, R.I.

§ In the Graduate Department of Brown University all courses intended for graduate students are open to women on the same terms as to men.

annually an Executive Committee of the Women's College. The Corporation receives gifts of money to found scholarships, fellowships, and professorships in Brown University for the benefit of its women students, and for the general purposes of the Women's College, and holds and administers such funds as separate and distinct from the general funds of the University. All gifts, legacies, and bequests for the Women's College, like those meant for any other department of the University, should be made payable to "Brown University, in Providence, in the State of Rhode Island and Providence Plantations," and designated for the use of the Women's College.

The President of the University is charged with the general direction, supervision, and government of this College as of other departments of the University. The immediate direction, supervision, and control devolve, subject to the direction of the President, on the Dean of the Women's College. An Advisory Council, appointed under the authority of the Corporation, advises with the President and the Dean upon matters relating to the Women's College, and makes recommendations to the Executive Committee of the Women's College or to the Corporation.

The Faculty of the Women's College is composed of the heads of all departments of instruction in Brown University, together with all professors and instructors who are actually teaching in the College.

The Women's College has a separate recitation hall, gymnasium, and dormitory, but uses the various libraries, laboratories, and museums of the University. For a description of these latter buildings, see pages 154–163. The grounds of the Women's College are an eighth of a mile from the University, with the main entrance at 172 Meeting Street. Pembroke Hall, the recitation building, contains the offices of the Dean and the Registrar, recitation rooms, a reading room and a library, a study, a chapel, and a lunch room. The Sayles Gymnasium contains the offices of the Instructor in Physical Training, a large hall with a gallery, two rest rooms, a room for corrective work, and a relaxation room; the basement is fitted up with dressing rooms, bathrooms, lockers, needle and shower baths, and bowling alleys. The dormitory, Miller Hall, opened in 1910, is on the college campus. It contains a library, reception, dining, and sitting rooms, an apartment for the Hall Mistress, and rooms for forty-eight students.

## REQUIREMENTS FOR ADMISSION

The requirements for admission to the Women's College are the same as those which the University prescribes for men. For information concerning admission by certificate or examination, and the times and places of examinations, see pages 41, 42. Certificates and applications for permission to take examinations should be sent to the Registrar of the University. For the entrance requirements for the various degrees, admission to advanced standing, and admission of special students, see pages 43–63. Each applicant for registration as a special student must consult the Dean of the Women's College before registering.

## REGISTRATION AND ENROLMENT

The regulations governing registration and enrolment are the same at the Women's College as at the University. (See pages 62, 63.) All students must apply for registration and enrolment at the office of the Registrar of the Women's College, in Pembroke Hall, between 9 a.m. and 12 m., or between 2 p.m. and 4 p.m., on either of the two days preceding the opening of college. Permission to change a previous registration must be obtained from the Dean, on the same days and at the same hours.

## REQUIREMENTS FOR DEGREES

The requirements for the various degrees are explained on pages 65–77. Upon students of the Women's College who complete satisfactorily the work leading to the degree of Bachelor of Arts, Bachelor of Philosophy, or Bachelor of Science, the Board of Fellows of the University confers the appropriate degree. For the degrees conferred in 1912, see pages 191–193.

## EXAMINATIONS

As a rule women take the same examinations as those offered to men, and at the same times and places. When a separate examination is necessary, the two examinations are made as nearly as possible identical in character. (See pages 78–80.)

## HYGIENE AND PHYSICAL EDUCATION

The aim of the work in Hygiene and Physical Education is to encourage habits of good hygienic living, special emphasis being placed upon proper body-posture, rational exercise, and rest. To this end, hygiene conferences with each student are held from time to time, a reference library in simple practical hygiene is supplied, physical examinations are given before the assignment of exercise and at the end of the year, and facilities are provided for exercise and rest. The courses offered in the gymnasium (see page 236) afford an opportunity for all students to take supervised exercise during the entire year. The rest rooms in Sayles Gymnasium are always open for the use of all students.

A thorough examination of all new students, basket-ball players, and such other students as need it is made at the beginning of each year by the Instructor in Hygiene and Physical Education and Dr. Frank T. Fulton. A course in general Biology (Biology 1, 2) is required of all candidates for the degree of Bachelor of Philosophy.

## CHAPEL EXERCISES

Chapel service is held four days a week at 9 a.m. On Wednesday morning at 9 a.m. the Student Government Association holds a mass meeting. Attendance is required on all five days. The vesper services held in Sayles Hall

are open to undergraduate women. The weekly meeting of the Young Women's Christian Association is held on Fridays at 1.45 p.m.

## FEES

Students at the Women's College pay the tuition fee of $150 in two instalments: $75 upon registration in September and $75 upon registration in February. Freshmen pay a matriculation fee of $5 upon registering in September. No deduction in tuition is made on account of absence. Laboratory fees, etc., must be paid two weeks before the close of a semester.

Special students at the Women's College are charged $15 a semester for each course holding three recitations a week. Laboratory fees are in addition to this.

## DORMITORY ACCOMMODATIONS

Miller Hall, the college dormitory, contains forty-eight single rooms, adequately furnished. The charge for room and board varies from $270 to $260 a year. Definite applications for rooms must be received by the Hall Mistress on or before May 1. The plan of the building and all other needed information is printed in a separate pamphlet, which may be obtained from Miss S. G. Ross, Hall Mistress, Miller Hall, 118 Cushing Street. Students who cannot secure rooms in Miller Hall are required to live in houses authorized by the College. A list of these may be obtained from the Hall Mistress.

## LOAN FUNDS, SCHOLARSHIPS, AND FELLOWSHIPS

The College has a loan fund and various scholarships designed to aid deserving students. Aid is given only to students whose work is creditable, and is withdrawn if the recipients become deficient in scholarship or subject to college discipline. Applications should be made in writing to the Dean of the Women's College on or before May 1. Awards are made after July 1.

The Rhode Island Society for the Collegiate Education of Women has founded a Loan Fund from which students of the Women's College who have completed their first year may borrow moderate sums at a low rate of interest. This fund is available only for students whose record for scholarship is satisfactory to the committee which administers the loans. Further information may be obtained from the Dean.

The Rhode Island Women's Club annually devotes the income of its Churchill Fund toward the payment of the tuition of some student in the Women's College, preferably the daughter of a member of the Club.

There are also the following endowed scholarships:

The Sarah E. Doyle Scholarship, of one thousand dollars, which bears the name of its founder; the income is applied toward the payment of the tuition of students in the Women's College who have been prepared for college in the Providence English High School.

The Sarah Sutton Scholarship, of one thousand dollars, founded by one of her daughters.

The Daniels Scholarship, of twenty-five hundred dollars; the income to be used toward paying the expenses of one or more women pursuing studies either in the University or in the Women's College.

The Howard Scholarship, of one thousand dollars, presented by James Leland Howard.

The Thayer Scholarship, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815; the income to be for the education of any young man or woman a resident of Uxbridge, Mass., indorsed by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

The Maria Storrs Peck Scholarship, of one thousand dollars, presented by her sisters.

The Eli Thayer Scholarship of the Oreads, of three thousand dollars, founded by the Oread Collegiate Institute Association, in memory of the Hon. Eli Thayer, the founder of the Institute; the income to be for the education of a deserving student in the Women's College, preferably a descendant of a former student of the Institute.

The William Fuller Ayer Scholarships, two of two thousand dollars each, one of one thousand dollars, founded by Dr. Oliver H. Arnold in memory of William Fuller Ayer; the income is given "to poor and deserving students showing diligence and marked ability in their collegiate studies."

The Emma Josephine (Ayer) Arnold Archaeological Fellowship, of ten thousand dollars, founded by Dr. Oliver H. Arnold in memory of his wife; the income is awarded, first, to a member of the graduating class, or, second, to a graduate of not more than ten years' standing, who is adequately prepared for post-graduate work in Archaeology, either Classical or Oriental, and who through scholarly attainments and by habits of zealous and diligent study gives great promise of a useful and successful career. The income is to be applied to the expenses of a one, two, or three year course in Archaeology either in the United States or in any foreign country. In case there is no applicant of sufficient merit among the alumnae, the Fellowship is to be awarded for one year to an alumnus of the University who meets the above requirements. If there are no applicants for the use of this Fellowship in Archaeology, it is to be given for one year of post-graduate work in Higher Mathematics to an alumna who has exceptional ability and intends to follow the teaching of Mathematics as a profession. Applications for this fellowship should be accompanied by academic records, testimonials as to character, ability, and health, specimens of written work, and a statement of the

applicant's plan of work, and should be sent to Dean King before January 1, 1913.

The College awards annually from its own funds scholarships of varying amounts, to students in need of financial aid.

## PRIZES, PREMIUMS, AND HONORS

The Gaspee Chapter Daughters of the American Revolution Prize. This prize of forty dollars is awarded annually to that student in the graduating class of the Women's College who shall present the best essay of recognized merit upon some topic in American history. The essays are to bear each an assumed name, and to be accompanied by an envelope marked with the assumed name and inclosing the candidate's real name and address. The essays must be handed to the Dean before May 1. The award is announced at Commencement. The subject for 1912–13 is: *The Place of Brown University in the History of Rhode Island.*

The Chace Prize. The will of Mrs. Elizabeth D. Chace makes provision for a prize of twenty-five dollars, to be awarded to that student of the Women's College who shall present the best essay, of recognized merit, upon the Women's Suffrage Movement.

The Society of Colonial Dames Prize in American History. The income of a fund of fifteen hundred dollars, known as the Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded annually as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Detailed regulations governing the competition are announced from year to year. The award is announced at Commencement. The subject for 1912–13 is: *The History of Paper Money Controversies in Rhode Island.*

Additional Premiums. The students of the Women's College are entitled to compete in all examinations for premiums and prizes offered in Brown University. In case any woman is entitled to a first premium, competed for by examination, a prize, the amount of which is duly announced, is awarded by the Dean.

Final Honors are awarded by the University to women on the same conditions as to men. (See pages 189, 190.)

## PRIZES AND PREMIUMS AWARDED IN 1912

The Gaspee Chapter Daughters of the American Revolution Prize, to
MARGARET PARKHURST STEVENS

The Chace Prize to
JESSIE ISABELLE MONROE

A collateral first premium in Greek to CLARA MABEL THOMPSON, instructed in the Classical High School, Providence.

A collateral first premium in German to EMILIE LISSETTE SAM, instructed in the Classical High School, Providence.

# STUDENTS IN THE WOMEN'S COLLEGE

## SENIORS: CLASS OF 1913

| NAME | RESIDENCE |
|---|---|
| Rose Mary Bancroft | *Glastonbury, Ct.* |
| Mary Elizabeth Barnicle | *Providence* |
| Jessie Helen Barr | *Providence* |
| Helen Irene Barrett | *Providence* |
| Marion Hortense Bayley | *Newburyport, Mass.* |
| Irene Mary Cecilia Belanger | *New Bedford, Mass.* |
| Marilla Letitia Bogle | *Fall River, Mass.* |
| Mildred Ethel Bosworth | *Georgiaville* |
| Aline Bourgeois | *Newport* |
| Hilda Rowena Bronson | *Morgan Park, Ill.* |
| Rosalind Celestine Brooks | *Providence* |
| Anna Maria Browne | *Pawtucket* |
| Mildred Browning | *Pawtucket* |
| Gladys Chidley Bushell | *Providence* |
| Alletta Kreemer Chamberlain | *Central Falls* |
| Mary Fifield Clarke | *Centerville* |
| Edith Frances Coolidge | *Fall River, Mass.* |
| Lillian Lucy Davenport | *Pawtucket* |
| Vida Maud Dexter | *Eden Park* |
| Norah Eloise Dowell | *Providence* |
| Cornelia Fill | *Springfield, Mass.* |
| Hazel Mellie Fowler | *Newburyport, Mass.* |
| Marion Bristow Greene | *Providence* |
| Helen Matilda Hastings | *Feeding Hills, Mass.* |
| Lucile Spencer Himes | *Phenix* |
| Alice Hubbard | *Providence* |
| Theckla Jones | *Westerly* |
| Mary Madeleine Kane | *Pontiac* |
| Elva Marion Lake | *Fall River, Mass.* |
| Alice Victoria Lisk | *Hackensack, N. J.* |
| Barbara Littlefield | *Providence* |
| Marion Rawson Luther | *Providence* |
| Isabel McMurtry | *Providence* |
| Ottilie Rose Metzger | *Providence* |
| Mildred Louise Mott | *Providence* |
| Annie Evelyn Ottley | *Wickford* |
| Gladys Paine | *Palmer, Mass.* |
| Winifred Augusta Palmer | *Cranston* |

| NAME | RESIDENCE |
|---|---|
| Bessie Gertrude Roche | *Thorndike, Mass.* |
| Ruth Elizabeth Ryther | *Providence* |
| Blanche Gertrude Snow | *Pawtucket* |
| Harriet Marguerite Stadtfeld | *Phenix* |
| Minnie White Taylor | *Providence* |
| Evelyn Butler Tilden | *Peru, Vt.* |
| Hazelle Marie Underwood | *Providence* |
| Myra Inman Washburn | *Charlotte, N. C.* |
| Elizabeth Wave Whitman | *South Attleboro, Mass.* |
| Catherine Slocum Williams | *Newport* |

## JUNIORS: CLASS OF 1914

| | |
|---|---|
| Esther Georgina Anderson | *Providence* |
| Marguerite Appleton | *Providence* |
| Miriam Amy Banks | *Providence* |
| Marion Cheever Bates | *Providence* |
| Harriet Stanton Baxter | *Montello, Mass.* |
| Elizabeth Bodfish | *Palmer, Mass.* |
| Alita Dorothy Bosworth | *Providence* |
| Mary Lyon Bosworth | *Providence* |
| Dorris Snow Briggs | *Providence* |
| Helen Harriet Briggs | *Providence* |
| Laura Julia Brown | *Barrington* |
| Margaret Josephine Burdon | *Oakville, Ct.* |
| Mildred Myrtle Chapman | *Providence* |
| Grace Amelia Cockroft | *Webster, Mass.* |
| Jane Wilson Cook | *Fall River, Mass.* |
| Ruth Elizabeth Cooke | *Providence* |
| Margaret Crooks | *Ravenswood, W. Va.* |
| Katherine Elizabeth Curry | *Longmeadow* |
| Mildred Elaine Cutler | *Pawtucket* |
| Hermione Louise Dealey | *Providence* |
| Marion Frances Devine | *Woonsocket* |
| Blanche Douglas | *Moosup, Ct.* |
| Mildred Morris Flagg | *Littleton, Mass.* |
| Anna Madeline Flaherty | *Valley Falls* |
| Helen Augusta Gilliland | *Norwood, Mass.* |
| Anna Ruth Goodchild | *Providence* |
| Margaret Ella Gordon | *Providence* |
| Mary Christina Grandfield | *Pawtucket* |
| Edith Edwina Holden | *West Barrington* |
| Dorothy Palmer Hull | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Myrtle Horton Jones | *Seattle, Wash.* |
| Sybil Marguerite Kemp | *Kingston, N. H.* |
| Elena Roxana Lovell | *East Providence* |
| Marjorie Anita Mallory | *Providence* |
| Elizabeth Price Moulton | *Providence* |
| Mabel Irene Osborne | *Danville, N. H.* |
| Jenny Martha Palmer | *Cranston* |
| Winona Merle Perry | *Providence* |
| Helen Olivia Price | *Providence* |
| Maude Eunice Sears | *Providence* |
| Rowena Albro Sherman | *Providence* |
| Florence McGregor Simonds | *Franklin, Mass.* |
| Hope Sisson | *Providence* |
| Stella Mary Smith | *Fall River, Mass.* |
| Marjorie Arnold Thayer | *Woonsocket* |
| Maud Tucker | *Providence* |
| Alice Mary Waddington | *Providence* |
| Della Edith Wood | *Providence* |
| Helen Humphry Wood | *Providence* |

## SOPHOMORES: CLASS OF 1915

| | |
|---|---|
| Elizabeth Lucy Angell | *Providence* |
| Madeleine Frances Bannan | *Providence* |
| Janet Macfarlane Bourn | *Providence* |
| Lucy Elizabeth Bourn | *Providence* |
| Katherine Canada | *Wellfleet, Mass.* |
| Almira Bashford Coffin | *Newport* |
| Lydia Louise Cooper | *Attleboro, Mass.* |
| Ethel Lucetta Crompton | *Methuen, Mass.* |
| Helen Lucille Crooker | *Meshanticut* |
| Grace Emma Currie | *Attleboro, Mass.* |
| Helen Alida Daniels | *Providence* |
| Marjorie May Farnum | *Uxbridge, Mass.* |
| Carrie Thompson Foulkes | *Mansfield, Mass.* |
| Fay Munroe Gannett | *Providence* |
| Marion Page Harley | *Pawtucket* |
| Emelia Adele Hempel | *Providence* |
| Ruth Margaret Henderson | *Norwich, Ct.* |
| Florence Belle Hopkins | *Foster* |
| Marion Katherine Horton | *Danielson, Ct.* |
| Elsbeth Jones | *Westerly* |
| Maybell Olney Kingsley | *Saylesville* |

| NAME | RESIDENCE |
|---|---|
| Gertrude Emma Kneeland | *Worcester, Mass.* |
| Marion Frances Knowlton | *Providence* |
| Lillian Irene Mathewson | *Johnston* |
| Mary Eleanor Moore | *Southington, Ct.* |
| Ruth Eleanor Norris | *Brockton, Mass.* |
| Marguerite Inez Peck | *Medway, Mass.* |
| Helen Earl Potter | *Natick* |
| Elinor Edna Randall | *Providence* |
| Frances Marjorie Richardson | *Putnam, Ct.* |
| Freda Sylvia Rose | *Providence* |
| Ethel Marguerite Sack | *Providence* |
| Blanche Antoinette Schiller | *Central Falls* |
| Florence Louise Shaw | *Webster, Mass.* |
| Ruth Sisson | *Providence* |
| Edna Goldberg Solinger | *Providence* |
| Edna Frances Southwick | *Pawtucket* |
| Nancy Steere | *Providence* |
| Lillian Sanford Stenhouse | *Middleboro, Mass.* |
| Elizabeth Agnes Sullivan | *Hamilton* |
| Pearle Lee Temple | *Providence* |
| Ruth Harriet Thayer | *Springfield, Mass.* |
| Hattie Loraine Turner | *Claremont, N. H.* |
| Marian Eleanor Walling | *Providence* |
| Elizabeth Gregory Walter | *Lyndonville, Vt.* |
| Alma May Waterman | *Cranston* |
| May Chaffee West | *Seekonk, Mass.* |
| Gladys Elizabeth Wilbur | *Natick* |
| Charlotte Audra Young | *Bristol* |
| Lucy Alma Young | *Danielson, Ct.* |

## FRESHMEN: CLASS OF 1916

| | |
|---|---|
| Sara Wilhelmina Bennett | *North Providence* |
| Emma Lillian Black | *Providence* |
| Mildred Edith Bliss | *Providence* |
| Loessa Marie Braun | *Port Chester, N. Y.* |
| Martha Marietta Burgess | *North Scituate* |
| Helen Rowland Burr | *Providence* |
| Mary Regina Butler | *Pawtucket* |
| Elizabeth Newton Buttrick | *Worcester, Mass.* |
| Albertine Louise Butts | *Providence* |
| Esther Clarissa Cook | *Woonsocket* |
| Margaret Frances Corey | *Pawtucket* |

| NAME | RESIDENCE |
|---|---|
| Elsie Wild Cushing | *North Providence* |
| Edith Chace Davis | *Chepachet* |
| Irene Celine Dougherty | *Providence* |
| Helen Gertrude Douglas | *Concord Junction, Mass.* |
| Sadie Jane Duguid | *North Grafton, Mass.* |
| Edith Violet Edwards | *Providence* |
| Natalie Florine Ellis | *Apponaug* |
| Marion Gray Evans | *Jefferson, N. H.* |
| Mildred Janet Evans | *Thornton* |
| Lily Mary Faust | *Cranston* |
| Mary Elizabeth Fearney | *Edgewood* |
| Sarah Newcomb Gallagher | *East Greenwich* |
| Helen Dudley Hartwell | *Providence* |
| Mabel Frances Hull | *Auburn* |
| Emma Frances Jenkins | *Oaklawn* |
| Anna Sara Jones | *Westerly* |
| Dorothy Margaret Leighton | *Providence* |
| Vivian Mildred Lewis | *Providence* |
| Elizabeth Eddy Little | *Edgewood* |
| Margaret McGonagle | *Pawtucket* |
| Alice Inez McMeehan | *Rumford* |
| Adele Ada Dora Marseglia | *Providence* |
| Margaret Gammell Meader | *Providence* |
| Eleather Marcella Mowry | *Woonsocket* |
| Mary Imelda O'Brien | *Providence* |
| Frances Patricia O'Connor | *Providence* |
| Marion Gertrude O'Day | *Worcester, Mass.* |
| Ethel Page | *Pawtucket* |
| Ruth Caroline Paine | *Apponaug* |
| Pauline Pearce | *Providence* |
| Elsie Pickles | *Providence* |
| Alice Olney Randall | *Providence* |
| Annie Evelyn Rathbun | *Anthony* |
| Emilie Lissette Sam | *Providence* |
| Rebecca Rogers Snow | *Pawtucket* |
| Helen Smith Speck | *Auburn* |
| Edith Marguerite Sprague | *Palmyra, Mich.* |
| Marion Elizabeth Stark | *Norwich, Ct.* |
| Marian Sweet | *Providence* |
| Clara Mabel Thompson | *Providence* |
| Helen Marguerite Thompson | *Saylesville* |
| Marian Marsh Torrey | *Providence* |
| Emma Rose Wagner | *Providence* |

| NAME | RESIDENCE |
|---|---|
| Beatrice Louise Waterhouse | *Uxbridge, Mass.* |
| Adele Madeleine Wildes | *Edgewood* |
| Gladys Evelyn Winsor | *Providence* |
| Alice May Wood | *Providence* |

## SPECIAL STUDENTS

| | |
|---|---|
| Helen Inman Binning | *Providence* |
| Margaret Harrison Bradley | *Providence* |
| Helen Everett | *Providence* |
| Laura Russell Gibbs | *Wareham, Mass.* |
| Mary Alice Granger | *Providence* |
| Grace Herreshoff | *Providence* |
| Anna Waterman Jackson | *Providence* |
| Helen Pierce Metcalf | *Providence* |
| Ione Murray | *Providence* |
| Marie Louise Parillo | *Providence* |

# APPENDIX

## THE BROWN UNIVERSITY TEACHERS' BUREAU

THE Brown University Teachers' Bureau was established for the purpose of facilitating communication between the heads of educational institutions and graduates of Brown who desire positions as teachers. To this end it solicits correspondence with those who are seeking teachers, and invites inspection of the list of teachers now registered. It advises graduates of Brown who wish its assistance to register at once, and, if possible, to meet the Secretary in a personal interview. It offers to undergraduates information as to subjects in which there is a demand for teachers, as to positions commonly open to recent graduates, and as to the preparation usually required. No charge for the services of the Bureau is made either to students or to schools. It is the further purpose of the Bureau to foster coöperation between the University and all graduates engaged in the work of education. As far as possible an accurate register of the addresses and the positions of all such graduates is kept. The office of the Secretary, Professor WALTER BALLOU JACOBS, is in the Administration Building, Room 10.

## THE BROWN UNIVERSITY BUREAU OF APPOINTMENTS

This Bureau has been established to assist former students of the University in securing other kinds of employment than those cared for by the Teachers' Bureau. It desires to obtain from friends of the University information in regard to positions available for college men. This information it will supply to those who may register with the Bureau. Blanks for this purpose may be obtained from the Secretary and no charge will be made for the services of the Bureau. The office of the Secretary, Professor ANSEL BROOKS, is in the Engineering Building, Room 15.

## THE BROWN UNIVERSITY TEACHERS' ASSOCIATION

The Brown University Teachers' Association was organized in 1903. The purpose of the Association is "first, to further the mutual interests of Brown University and the schools preparing students therefor; and second, to pro-

mote the welfare of the Alumni of the University who are teachers." The tenth annual meeting of the Association was held at Brown University on Friday and Saturday, March 29 and 30, 1912.

OFFICERS FOR 1912–13

*President:* Everett Brownell Durfee, A.M., *Superintendent of Schools, Fall River, Mass.*

*First Vice-President:* Albert Knight Potter, A.M., *Associate Professor of the English Language, Brown University.*

*Second Vice-President:* John Shaw French, Ph.D., *Principal, Morris Heights School, Providence.*

*Secretary:* Walter Ballou Jacobs, A.M., *Professor of Education, Brown University.*

*Treasurer:* Clarence Hartwell Manchester, A.M., *Teacher of English, Technical High School, Providence.*

*Executive Committee:* The Officers of the Association and the President of the University, *ex officio;* Amasa Amidon Holden, A.M., *Principal High School, York, Pa.;* Lida Shaw King, Litt.D., *Dean of Women's College, Brown University;* Alfred Joseph Maryott, *Principal High School, Peace Dale, R. I.*

## THE RHODE ISLAND ALPHA OF THE PHI BETA KAPPA SOCIETY

OFFICERS AND COMMITTEES FOR 1912–13

*President:* Professor Albert Granger Harkness, Litt.D.

*Vice-President:* Robert Perkins Brown, A.M.

*Secretary:* Professor James Quayle Dealey, Ph.D.

*Treasurer:* Charles Carney Mumford, A.M.

*Committee on Nominations:* Professor Winslow Upton, Sc.D., Charles Talbot Dorrance, A.B., Harold Crins Field, A.B., William Holden Eddy, Ph.D., Zechariah Chafee, A.B.

*Committee on Arrangements:* Professor Walter Goodnow Everett, Ph.D., Dr. George Thurston Spicer, A.M., Norman M. Isham, A.M.

*Auditing Committee:* Walter James Towne, A.M., William Washburn Moss, A.M.

*Committee on New Chapters:* Professor James Quayle Dealey, Ph.D., Professor Walter Ballou Jacobs, A.M., Charles Abbott Phillips, A.B.

MEN ELECTED IN 1912

*Seniors:* Warren Randolph Burgess, James Cornelius Elms, Jr., Clarence Frank Gifford, Abraham Harry Gretsch, Raymond Preston Hawes, John Sprague Hodgson, Ralph Gibney Hurlin, Arthur Franklin Newell, John Henry Williams, Herbert Edward Wolfe.

*Juniors:* William Learned Dealey, Harold Alden Grout, Albert Pray Martin, Walter Henry Snell, John Kent Starkweather, William Matthew Sullivan, Norman Stephen Taber, Robert Stanley Thomson.

WOMEN ELECTED IN 1912

*Seniors:* Harriet Colburn Bennett, Mildred Catherine Bishop, Ann Eliza Thomas, Irene Warren.

*Juniors:* Mary Elizabeth Barnicle, Hilda Rowena Bronson, Hazel Nellie Fowler.

## THE BROWN CHAPTER OF THE SOCIETY OF THE SIGMA XI

Students who have taken at least fifty-two semester hours in pure or applied science are, in their Senior year, eligible to membership in the honorary scientific society, Sigma Xi, provided that they have "given promise of marked ability in those lines of work which it is the object of the Society to promote."

OFFICERS AND COMMITTEES FOR 1912–13

*President:* Professor Frederic Poole Gorham, A.M.

*Vice-President:* Professor Charles Wilson Brown, A.M.

*Recording Secretary:* Professor Roland George Dwight Richardson, Ph.D.

*Corresponding Secretary:* Professor Thurston Mason Phetteplace, A.M.

*Treasurer:* Professor Herbert Eugene Walter, Ph.D.

*Auditor:* Professor Henry Parker Manning, Ph.D.

*Councillor:* Professor Albert deForest Palmer, Ph.D.

*Committee on Nominations:* Professor Albert Davis Mead, Ph.D., Professor Winslow Upton, Sc.D., Professor William Herbert Kenerson, M.E., Professor Roland George Dwight Richardson, Ph.D., Professor John Edward Hill, Sc.D.

MEMBERS ELECTED IN 1912

*Graduate:* Lester Angell Round.

*Seniors:* Arthur Francis Buddington, Theodore Bryant Farnsworth, Paul Hart Francis, Joseph Dydime Guillemette, Romeo Raoul Martel, Annie Pickles, Irving Russell Smith, Florence Binford Southwick.

## THE ASSOCIATED ALUMNI

### OFFICERS AND COMMITTEES FOR 1912–13

*President:* George Grafton Wilson, Ph.D., '86, Cambridge, Mass.

*Vice-Presidents:* Donald Littlefield Morrill, A.M., '80, Chicago, Ill. Edward Otis Stanley, '76, New York.

*Secretary:* Albert Knight Potter, A.M., '86, Providence.

*Treasurer:* Robert Wendell Taft, Ph.B., '91, Providence.

*Executive Committee:* James Monroe Pendleton, A.M., '85, William Chace Greene, A.M., '75, Frederick Rowland Hazard, A.M., '81, Byron Sprague Watson, A.B., '97, Walter Lee Munro, '79, Providence.

*Advisory Board:* Charles Carney Mumford, A.M., '81, George Fremont Bean, LL.B., '81, William Richardson Dorman, A.B., '92, Albert Knight Potter, A.M., '86, *ex officio*, and representatives chosen by the Alumni Associations.

## ALUMNI ASSOCIATIONS

Boston. *President*, Rev. Orrin P. Gifford, D.D., '74. *Vice-Presidents*, Hon. Joseph Walker, '87, Frederick D. Ely, '59, Fred H. Williams, '77, Professor George G. Wilson, '86, George F. Bean, '81. *Treasurer*, Geo. G. Bass, '00. *Secretary*, Ralph B. Harris, '97, 2 Pickman Street, Salem, Mass.

Newport. *President*, William R. Harvey, '01. *First Vice-President*, Dr. John A. Young, '00. *Second Vice-President*, William P. Buffum, '79. *Secretary and Treasurer*, Alfred G. Langley, '76, 1 School Street, Newport, R. I.

Woonsocket. *President*, L. Herbert Ballou, '05. *Vice-President*, George W. Rickard, '00. *Treasurer*, Howard K. Jackson, '09, *Secretary*, Frederic Earle Whitaker, '88, 9 Longley Building, Woonsocket, R. I.

Fall River. *President*, Everett B. Durfee, '84. *Vice-President*, David F. Slade, '80. *Treasurer*, Guilford C. Hathaway, '99. *Secretary*, Harry Smalley, '04, 611 June Street, Fall River, Mass.

Worcester County Sons of Brown. *President*, Clifford S. Anderson, '00. *Vice-President*, John A. Clough, '99. *Secretary and Treasurer*, W. H. Whiting, '01, 390 Main Street, Worcester, Mass.

Connecticut Valley. *President*, Scott Adams, '95. *Vice-President*, Ralph W. Stoddard, '00. *Secretary and Treasurer*, Arthur S. Gaylord, '02, South Hadley Falls, Mass.

New Bedford. *President*, Edmund Wood, '76. *First Vice-President*, Theodore B. Baylies, '95. *Second Vice-President*, Edward T. Tucker, '71. *Secretary and Treasurer*, Edward W. Holmes, '03, 661 County Street, New Bedford, Mass.

WASHINGTON AND NEW LONDON COUNTIES. *President*, Henry R. Palmer, '90. *Secretary*, Charles I. Gates, '99, Westerly, R. I.

BRISTOL. *President*, Hon. Augustus O. Bourn, '55. *First Vice-President*, Rev. William R. Trotter, '80. *Second Vice-President*, Nathaniel G. Herreshoff, '96. *Treasurer*, James F. Lavander, '02. *Secretary*, Howard R. Newman, '08, 110 High Street, Bristol, R. I.

NEW HAMPSHIRE AND VERMONT. *President*, George I. Hopkins, '75. *Vice-President*, Reuben E. Walker, '75. *Treasurer*, Carroll S. King. *Secretary*, Dr. Henry W. N. Bennett, '97, Manchester, N. H.

WESTERN MAINE. *President*, Professor Alfred W. Anthony, '83. *Treasurer*, Thomas J. Burrage,'98. *Secretary*, Newton C. Reed, n. '03, Evening Express, Portland, Me.

NEW YORK CITY. *President*, Edward O. Stanley, '76. *Treasurer*, Hermon N. Coulter, n. '05. *Secretary*, Herbert B. Keen, '07, 44 West 44th Street, New York City.

ALBANY. *President*, Charles S. Aldrich, '94. *Vice-President*, Arthur G. Host, '98. *Secretary and Treasurer*, Frank C. Hulse, '05, 325 Brandywine Avenue, Schenectady, N. Y.

CENTRAL NEW YORK. *President*, Frederick R. Hazard, '81. *Vice-President*, Jay S. Fox, '94. *Secretary and Treasurer*, Warren G. Bullard, '92, 613 South Crouse Avenue, Syracuse, N. Y.

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# TABLE SHOWING RENT AND LOCATION OF DORMITORY ROOMS

## HOPE COLLEGE

| *No.* | *Division* | *Floor* | *Windows face* | *Bedrooms* | *Rent* |
|---|---|---|---|---|---|
| 1 | South | 1 | E. & S. | There are no separate bedrooms, but Nos. 1 and 2, 5 and 6, 9 and 10, 35 and 36, 39 and 40, 43 and 44, can be used either as suites or as single rooms. | $136 |
| 2 | " | " | W. & S. | | 142 |
| 3 | " | " | W. | | 136 |
| 4 | " | " | E. | | 133 |
| 5 | " | 2 | E. & S. | | 136 |
| 6 | " | " | W. & S. | | 142 |
| 7 | " | " | W. | | 136 |
| 8 | " | " | E. | | 133 |
| 9 | " | 3 | E. & S. | | 127 |
| 10 | " | " | W. & S. | | 137 |
| 11 | " | " | W. | | 127 |
| 12 | " | " | E. | | 121 |
| 13 | " | 4 | E. & S. | | 121 |
| 14 | " | " | W. & S. | | 127 |
| 15 | " | " | W. | | 121 |
| 16 | " | " | E. | | 118 |
| 17 | Middle | 1 | E. | | 133 |
| 18 | " | " | W. | | 136 |
| 19 | " | " | W. | | 136 |
| 20 | " | " | E. | | 133 |
| 21 | " | 2 | E. | | 133 |
| 22 | " | " | W. | | 136 |
| 23 | " | " | W. | | 136 |
| 24 | " | " | E. | | 133 |
| 25 | " | 3 | E. | | 121 |
| 26 | " | " | W. | | 127 |
| 27 | " | " | W. | | 127 |
| 28 | " | " | E. | | 121 |
| 29 | " | 4 | E. | | 118 |
| 30 | " | " | W. | | 121 |
| 31 | " | " | W. | | 121 |
| 32 | " | " | E. | | 118 |
| 33 | North | 1 | E. | | 133 |
| 34 | " | " | W. | | 136 |
| 35 | " | " | W. | | 148 |
| 36 | " | " | E. | | 148 |
| 37 | " | 2 | E. | | 133 |
| 38 | " | " | W. | | 136 |
| 39 | " | " | W. & N. | | 148 |
| 40 | " | " | E. & N. | | 148 |
| 41 | " | 3 | E. | | 121 |
| 42 | " | " | W. | | 127 |
| 43 | " | " | W. & N. | | 136 |
| 44 | " | " | E. & N. | | 136 |
| 45 | " | 4 | E. | | 118 |
| 46 | " | " | W. | | 121 |
| 47 | " | " | W. & N. | | 127 |
| 48 | " | " | E. & N. | | 127 |

## UNIVERSITY HALL

| *No.* | *Division* | *Floor* | *Windows face* | *Bedrooms* | *Rent* |
|---|---|---|---|---|---|
| 4 | South | 1 | W. | *None* | $140 |
| 10 | " | 2 | S. & W. | 2 | 235 |
| 12 | " | " | W. | *None* | 125 |
| 13 | " | " | W. | " | 125 |
| 16 | " | " | E. | " | 110 |
| 17 | " | " | E. | " | 116 |
| 18 | " | " | E. & S. | " | 143 |
| 19 | " | 3 | S. & W. | 2 | 225 |
| 21 | " | " | W. | *None* | 122 |
| 22 | " | " | W. | " | 122 |
| 25 | " | " | E. | " | 110 |
| 26 | " | " | E. | " | 110 |
| 27 | " | " | E. & S. | " | 131 |
| 28 | " | 4 | S. & W. | 2 | 205 |
| 30 | " | " | W. | *None* | 110 |
| 31 | " | " | W. | " | 110 |
| 32 | " | " | E. | " | 107 |
| 33 | " | " | E. | " | 107 |
| 34 | " | " | E. & S. | " | 131 |
| 36 | North | 1 | W. | " | 141 |
| 40 | " | 2 | W. | " | 125 |
| 41 | " | " | W. | " | 125 |
| 43 | " | " | W. & N. | 2 | 235 |
| 44 | " | " | E. & N. | *None* | 131 |
| 45 | " | " | E. | " | 116 |
| 46 | " | " | E. | " | 116 |
| 47 | " | 3 | W. | " | 116 |
| 48 | " | " | W. | " | 116 |
| 50 | " | " | W. & N. | 2 | 225 |
| 51 | " | " | E. & N. | *None* | 125 |
| 52 | " | " | E. | " | 110 |
| 53 | " | " | E. | " | 110 |
| 54 | " | 4 | W. | " | 110 |
| 55 | " | " | W. | " | 110 |
| 57 | " | " | W. & N. | 2 | 195 |
| 58 | " | " | E. & N. | *None* | 125 |
| 59 | " | " | E. | " | 107 |
| 60 | " | " | E. | " | 107 |

## SLATER HALL

| | | | | | |
|---|---|---|---|---|---|
| 1 | South | 1 | E. S. & W. | 2 | 260.00 |
| 2 | " | " | E. & W. | 1 | 200.00 |
| 3 | " | 2 | E. S. & W. | 2 | 260.00 |
| 4 | " | " | E. & W. | 2 | 245.00 |
| 5 | " | 3 | E. S. & W. | 2 | 250.00 |
| 6 | " | " | E. & W. | 2 | 245.00 |
| 7 | " | 4 | E. S. & W. | 1 | 175.00 |
| 8, 9 | " | " | W. | 1 | 194.00 |
| 10 | North | 1 | E. & W. | 2 | 269.50 |
| 11 | " | " | E. W. & N. | 2 | 269.50 |

## SLATER HALL (*continued*)

| *No.* | *Division* | *Floor* | *Windows face* | *Bedrooms* | *Rent* |
|---|---|---|---|---|---|
| 12 | North | 2 | E. & W. | 2 | $269.50 |
| 14 | " | " | W. N. E. | 2 | 286.00 |
| 15 | " | 3 | W. & E. | 2 | 264.00 |
| 17 | " | " | W. N. E. | 2 | 275.00 |
| 18, 19 | " | 4 | E. & W. | 1 | 206.80 |
| 20 | " | " | W. N. E. | 1 | 176.00 |

## CASWELL HALL

| | | | | | |
|---|---|---|---|---|---|
| 1 | North | 1 | E. N. & W. | 1 | 375 |
| 2 | " | " | E. & W. | 1 | 350 |
| 3 | " | 2 | E. N. & W. | 2 | 375 |
| 4 | " | " | E. & W. | 2 | 350 |
| 5 | " | 3 | E. N. & W. | 2 | 375 |
| 6 | " | " | E. & W. | 2 | 350 |
| 7 | " | 4 | E. & N. | *None* | 195 |
| 8 | " | " | W. & N. | " | 195 |
| 9 | " | " | W. | " | 165 |
| 10 | " | " | E. | " | 165 |
| 11 | Middle | 1 | " | " | 175 |
| 12 | " | " | W. | " | 175 |
| 13 | " | " | " | " | 175 |
| 14 | " | " | E. | " | 175 |
| 15 | " | 2 | " | " | 185 |
| 16 | " | 2 | W. | " | 185 |
| 17 | " | " | " | " | 185 |
| 18 | " | " | E. | " | 185 |
| 19 | " | 3 | " | " | 185 |
| 20 | " | " | W. | " | 185 |
| 21 | " | " | " | " | 185 |
| 22 | " | " | " | " | 185 |
| 23 | " | 4 | E. | " | 165 |
| 24 | " | " | W. | " | 165 |
| 25 | " | " | " | " | 165 |
| 26 | " | " | E. | " | 165 |
| 27 | South | 1 | E. & W. | 1 | 350 |
| 28 | " | 1 | E. S. & W. | 1 | 375 |
| 29 | " | 2 | E. & W. | 2 | 350 |
| 30 | " | " | E. S. & W. | 2 | 375 |
| 31 | " | 3 | E. & W. | 2 | 350 |
| 32 | " | " | E. S. & W. | 2 | 375 |
| 33 | " | 4 | E. | *None* | 165 |
| 34 | " | " | W. | " | 165 |
| 35 | " | " | W. & S. | " | 195 |
| 36 | " | " | E. & S. | " | 195 |

## MAXCY HALL

| *No.* | *Floor* | *Windows face* | *Rent* |
|---|---|---|---|
| 313 | 3 | E. | $140 |
| 314 | " | " | 140 |
| 315 | " | E. & S. | 140 |
| 316 | " | W. & S. | 135 |
| 317 | " | W. | 135 |
| 318 | " | " | 135 |
| 319 | " | " | 135 |
| 320 | " | " | 135 |
| 321 | " | W. & N. | 135 |
| 322 | " | E. & N. | 140 |
| 323 | " | E. | 140 |
| 324 | " | " | 140 |
| 425 | 4 | " | 140 |
| 426 | " | " | 140 |
| 427 | " | E. & S. | 140 |
| 428 | " | W. & S. | 135 |
| 429 | " | W. | 135 |
| 430 | " | " | 135 |
| 431 | " | " | 135 |
| 432 | " | " | 135 |
| 433 | " | W. & N. | 135 |
| 434 | " | E. & N. | 140 |
| 435 | " | E. | 140 |
| 436 | " | " | 140 |

## DIRECTORY TO THE DORMITORIES

Hope College, South Division, Rooms 1 to 16.
Hope College, Middle Division, Rooms 17 to 32.
Hope College, North Division, Rooms 33 to 48.
Maxcy Hall, Rooms 313 to 436.
Slater Hall, South Division, Rooms 1 to 9.
Slater Hall, North Division, Rooms 10 to 20.
University Hall, South Division, Rooms 1 to 34.
University Hall, North Division, Rooms 35 to 61.
Caswell Hall, North Division, Rooms 1 to 10.
Caswell Hall, Middle Division, Rooms 11 to 26.
Caswell Hall, South Division, Rooms 27 to 36.

# SUMMARY OF STUDENTS

## UNDERGRADUATE MEN

| | |
|---|---|
| Seniors | 127 |
| Juniors | 126 |
| Sophomores | 172 |
| Freshmen | 191 |
| Special Students | 21 |
| Total | 637 |

## THE WOMEN'S COLLEGE

| | |
|---|---|
| Seniors | 48 |
| Juniors | 49 |
| Sophomores | 50 |
| Freshmen | 58 |
| Special Students | 10 |
| Total | 215 |

## GENERAL SUMMARY

| | |
|---|---|
| Graduates | 96 |
| Undergraduate Men | 637 |
| Women's College | 215 |
| | 948 |
| Deduct for names counted twice | 7 |
| Total | 941 |

# DIRECTORY OF OFFICERS AND STUDENTS

The addresses given are in Providence, unless otherwise stated. If an officer is on leave of absence for the year, his name is bracketed. The following abbreviations are used: *Fr.* = Freshman; *So.* = Sophomore; *Jr.* = Junior; *Sr.* = Senior; *Sp.* = Special Student; *Gr.* = Graduate Student; *W.* = Women's College; *J. C. B. L.* = John Carter Brown Library; H. = Hope College; U. = University Hall; S. = Slater Hall; M. = Maxcy Hall; C. = Caswell Hall; B. = Brunonia Hall; 65 College = 65 College Street, Providence, etc. Where no state is mentioned, Rhode Island is to be understood. The number *precedes* the name of a street, but *follows* the name of a building.

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Adleman, M., *Fr.* 165 Camp
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Affleck, W. R., *Fr.* C. 7
Ainsworth, L. J., *Jr.* H. 8
Allen, C. G., *Sp.* 4 Manning
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ALLINSON, Mrs. F. G., *Adv. Council, W.* 163 George
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Anthony, Miss E. W., *Gr.* 55 Eddy
APPLETON, J. H., *Prof.* 209 Angell
Appleton, M., *W. Jr.* 209 Angell
ARCHIBALD, R. C., *Asst. Prof.*
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Arnold, P. F., *Sr.* 100 Waterman
Arnold, S. T., *Sr.* U. 53
Aron, S. L., *Sr., Gr.* 62 Hilton
Aronovici, Mrs. F. P., *Gr.* 11 Arnold
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200 W. 56th, New York, N. Y.
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Bailey, W. E., *Sr.* 94 Angell
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6 Cushing
Bair, J. R., *Sr.* S. 5

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Bancroft, R. M., *W. Sr.* 114 Narragansett Ave.
Banfield, S. M., *Sp.* B. 12
Banigan, R. D., *Fr.* 468 Angell
Banks, H. C., *Sr.* C. 12
Banks, M. A., *W. Jr.* 197 Colfax
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Barney, H. C., *Fr.* 105 Summit Ave., East Prov.
Barnicle, M. E., *W. Sr.* 221 Messer
Barr, J. H., *W. Sr.* 117 Howell
Barrett, H. I., *W. Sr.* 20 Babcock
Bartlett, A. E., *Jr.* 4 Manning
Baruch, I., *So.* M. 322
Barus, C., *Prof.; Dean of Graduate Dept.* 30 Elmgrove Ave.
Barus, Mrs. C., *Adv. Council, W.* 30 Elmgrove Ave.
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Bates, M. E., *Instr. W.* 118 Cushing
Bauer, L. E., *Fr.* U. 46
Baxter, H. S., *W. Jr.* 118 Cushing
Bayley, M. H., *W. Sr.* 118 Cushing
Beachen, A. E., *Jr.* H. 18
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Blake, I. H., *Gr.* R. I. Hall
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Blanchard, R. L., *So.* 701 Smith
Blanton, J. O., *Gr.* 277 Thayer
Bliss, H., *So.* 46 Cooke
Bliss, M. E., *W. Fr.* 68 Baker
Bliven, G. F., *So.* 162 Albert Ave., Edgewood
Blodgett, W. W., *Sr.* S. 5
Blue, E. W., *Fr.* M. 433
Boardman, I. T., *Jr.* 112 Ring
Boas, G., *Sr., Gr.* 184 Atlantic Ave.
Bodfish, E., *W. Jr.* 118 Cushing
Bogle, M. L., *W. Sr.* 188 Meeting
Bohl, L. T., *Sr.* 41 George
Bongartz, R. B., *So.* S. 1
Booth, J. M., *Fr.* U. 21
Borden, R. F., *Jr.* 33 Angell
Bosworth, A. D., *W. Jr.* 160 Burrington
Bosworth, E. H., *Fr.* U. 21
Bosworth, M. E., *W. Sr.* Georgiaville
Bosworth, M. L., *W. Jr.* 359 Blackstone
Bourgeois, A., *W. Sr.* 5 Hidden
Bourn, J. M., *W. So.* 265 Orms
Bourn, L. E., *W. So.* 265 Orms
Bowen, E. A., *So.* H. 23
Bowen, J. B., *So.* 64 Summit, Pawt.
Bower, J. H., *So.* C. 19
Brackett, E. T., *Jr.* 127 Angell
Brackett, R. O., *Fr.* 127 Angell
Bradley, M. H., *W. Sp.* 367 Benefit

Brady, C. E., *Jr.* S. 7
Braun, L. M., *W. Fr.* 118 Cushing
Breckenridge, F. C., *So.* H. 4
Breckenridge, W. T., *So.* U. 18
Brice, H. D., *So.* 42 George
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Briggs, H. H., *W. Jr.* 213 Doyle Ave.
Briggs, R. E., *Fr.* 107 Angell
Brokenshire, J. R., *Fr.* H. 31
Bronson, H. R., *W. Sr.* 118 Cushing
Bronson, Mrs. M. W., *Asst. Cataloguer* 11 Benefit
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Brown, E. K., *Jr.* H. 18
Brown, Miss G. E., *Sec'y to Dean* 42 W. Friendship
Brown, H. A., *Jr.* 107 George
Brown, H. C., *Sr.* U. 53
Brown, J. R., *Fr.* 221 Thayer
Brown, L., *Trustee* 16 Warren, Norwich, Ct.
Brown, L. J., *W. Jr.* Barrington
Brown, L. L., *Gr.* 473 June, Fall River, Mass.
Brown, O. A., *So.* U. 12
Brown, S. O., *So.* City Hospital
Browne, A. M., *W. Sr.* 232 Cottage, Pawtucket
Browning, M., *W. Sr.* 39 Underwood, Pawtucket
Bucher, J. E., *Assoc. Prof.* Summit
Buddington, A. F., *Gr.* H. 29
Buehler, W. F., *Jr.* C. 21
Buffum, M. C., *Sr.* 54 College
Bugbee, E. T., *Jr.* 41 George
Bumpus, H. C., *Fellow* Univ. of Wisconsin, Madison, Wis.
Burdon, M. J., *W. Jr.* 118 Cushing
Burgess, M. M., *W. Fr.* 54 Sycamore
Burlingame, E. A., *Supt. Grounds and Buildings* 359 Brook
Burnell, R. L., *So.* 65 College
Burnham, R. E., *Sr.* H. 21
Burr, H. R., *W. Fr.* 129 Doyle Ave.
Burrage, H. S., *Fellow* Togus, Me.
Burrill, L. H., *So.* 260 Benefit
Burroughs, Miss R. C., *Asst. Ref. Librarian* 58 Sayles Ave., Pawtucket
Burt, A. J., *Fr.* 35 Howell
Burton, Miss A. I., *Asst.* 20 Hillside Ave.
Burton, H. H., *Fr.* C. 15
Burton, N. B., *Fr.* 41 Angell
Burwell, J. K., *Sr.* S. 4
Burwell, W. R., *So.* S. 4
Bushell, G. C., *W. Sr.* 617 Hope
Butler, M. R., *W. Fr.* 32 Gooding, Pawtucket
Butterweck, H. S., *Fr.* C. 13
Buttrick, E. N., *W. Fr.* 118 Cushing
Butts, A. L., *W. Fr.* 179 Elmgrove Ave.
Byam, S. G., *Fr.* 119 Waterman

Cady, H. D., *Sp. Instr.* U. 2
Cairns, G. J. A., *Fr.* 680 Chalkstone Ave.
Campbell, E. R., *So.* H. 8
Campbell, L. B., *So.* H. 21
Canada, K., *W. So.* 166 Whittier Ave.
Carlborg, Miss E. M. L., *Asst. Cataloguer* 124 Atlantic Ave.
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Carr, L. H., *Sr.* 127 Angell

Carroll, C., *Gr.* 79 Linwood Ave.
Case, J. R., *Sr.* U. 50
Casey, E. R., *Fr.* S. 7
Casey, J., Jr., *Sr.* S. 7
Cashman, J. J., *Fr.* 89 Knowles
Caswell, R. G., *Gr. Instr.* C. 8
Caswell, T. H., *Fr.* H. 35
Cate, A. W., *Jr.* 370 Lloyd Ave.
Chace, A. B., *Trustee and Chancellor* 324 Angell
Chace, J., *Trustee* Valley Falls
Chamberlain, A. K., *W. Sr.* 118 Cushing
Champlin, W. R., *Sp.* 82 Olney
Champney, H. H., *Jr.* 397 Winthrop, Taunton, Mass.
Chandler, T., *So.* 100 Waterman
Chandler, W. W., *So.* 4 Cushing
Chapman, B. E., *So.* S. 15
Chapman, M. M., *W. Jr.* 129 Moore
Chappell, W. A., *Jr.* 32 Custom House
Chase, P. P., *University Physician* U. 1
Chase, W. C., *Fr.* 50 University Ave.
Chatterton, A. H., *Sp.* 24 Kossuth, Pawtucket
Church, Miss M. B., *Gr.* 292 Wayland Ave.
Clark, T., *Asst. Registrar* 152 Congdon
Clark, W. J., *Fr.* C. 11
Clarke, M. F., *W. Sr.* Centerville
Cleaveland, E. R., *Jr.* B. 14
Clegg, C. M., *So.* C. 31
Clifford, S., *Fr.* No. S.
Coburn, R. V., *Sr.* 65 College
Cockroft, G. A., *W. Jr.* 118 Cushing
Coffin, A. B., *W. So.* 125 Governor
Cohen, H. L., *Fr.* 96 W. Clifford
Colby, E., *Trustee* Llewellyn Park, Orange, N. J.
Colby, G., *Trustee* 132 Harrison, East Orange, N. J.
Coleman, J. S., *Fr.* 40 Brighton
Collier, T. F., *Assoc. Prof.* 116 Governor
Collins, G. L., *Trustee* 223 Benefit
Collins, P. D., *Sr.* C. 17
Colvin, S. S., *Prof.* 335 Lloyd Ave.
Colwell, R. C., *Sr.* 127 Angell
Comstock, Miss A. M., *Gr.* 76 Humboldt Ave.
Cone, H. J., *So.* H. 34
Cook, A. N., *Jr.* 81 Waterman
Cook, E. C., *W. Fr.* 118 Cushing
Cook, E. P., *Jr.* 65 College
Cook, J. E., *Jr.* M. 432
Cook, J. W., *W. Jr.* 125 Governor
Cooke, R. E., *W. So.* 45 Arch
Coolidge, E. F., *W. Sr.* 118 Cushing
Coop, A. B., *Fr.* 46 Rochambeau Ave.
Cooper, F. E., *Sr.* H. 25
Cooper, L. L., *W. So.* Attleboro, Mass.
Copeland, R. E., *So.* 94 Angell
Corcoran, E. J., *So.* C. 25
Corcoran, E. P., *Fr.* H. 40
Corey, M. F., *W. Fr.* 11 French, Pawtucket
Corp, C. F., *So.* 94 Angell
Couse, J. M., *Fr.* 94 Angell
Cram, F. M., *Jr.* 110 Waterman
Cram, R. W., *So.* H. 40
Cripps, E. T., *Sr.* 54 Sampson Ave.
Cristy, E. I., *Fr.* 102 Wayland Ave.
Crocker, F. B., *So.* H. 4
Crolius, W. C., Jr., *So.* No. S.
Crompton, E. L., *W. So.* Y. W. C. A.
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Crooks, M., *W. Jr.* 118 Cushing
Crosby, T., *Assoc. Prof.* 49 George
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Cross, H., *Asst. Prof.* 388 Benefit
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Crowther, G. M., *Sr.* H. 12
Crum, P. R., *So.* C. 29
Crum, R. B., *Sr.* 54 College
Culver, S. E., *So.* U. 52
Cumerford, G. B., *Fr.*
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Cummings, J. L., *Jr.* C. 10
Cummings, L. R., *Sr.* C. 33
Currie, G. E., *W. So.* 7 Congdon
Currier, C. H., *Instr.* U. 2
Currier, C. W. G., *Fr.* 94 Angell
Curry, K. E., *W. Jr.* Longmeadow
Curtis, G. D., *Fr.* Warwick
Curtis, P. O., *So.* 81 Waterman
Cushing, E. W., *W. Fr.*
109 Smithfield Road
Cushing, H. L., *Jr.* Seekonk, Mass.
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Cutler, M. E., *W. Jr.*
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[Damon, L. T.,] *Prof.* U. 36
Daniels, H. A., *W. So.* 119 Thayer
Daniels, R. J., *Fr.* U. 27
Davenport, E. F., *Fr.* H. 48
Davenport, L. L., *W. Sr.*
158 Pine, Pawtucket
Davis, B. N., *W. Director of Chapel Music* 8 Hamilton
Davis, C. A., *Jr.* H. 28
Davis, E. C., *W. Fr.* Chepachet
Davis, F., *So.* H. 44
Davis, F. P., *Sr.* C. 33
Davis, H. M., *Fr.* 39 Quaid
Davis, N. F., *Prof.* 159 Brown
Davis, W. E., *Gr.* 188 Meeting
Dealey, H. L., *W. Jr.* 872 Hope
Dealey, J. Q., *Prof.* 872 Hope
Dealey, W. L., *Sr. Gr.* 872 Hope
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Delabarre, E. B., *Prof.*
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Denham, H. G., *So.* U. 52
Devine, M. F., *W. Jr.* 118 Cushing
Dexter, R. C., *Gr.* 55 Waterman
Dexter, V. M., *W. Sr.*
42 Blackamore Ave., Eden Park
Dick, W. H., *Fr.* M. 321
Donahue, T. H., Jr., *Fr.*
211 Doyle Ave.
Donnan, W. D., *So.* C. 30
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Dougherty, I. C., *W. Fr.*
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Douglas, B., *W. Jr.* 118 Cushing
Douglas, H. G., *W. Fr.* 118 Cushing
Douglass, W. W., *Trustee*
107 Prospect
Dowell, N. E., *W. Sr.* 169 Fifth
Doyle, Miss S. E., *Adv. Council, W.*
119 Prospect
Drake, H. F., *So.* H. 14
Dresser, R., *Fr.* C. 34
Droege, J. A., Jr., *So.* 52 Patterson
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Dugan, P. F., *Jr.* 110 Waterman
Duguid, S. J., *W. Fr.* 182 Meeting
Dukette, E. R., *Jr.* 41 George
Dumbleton, H. F., *Sr.*
100 Waterman
Duncan, N. L., *So.* 100 Waterman
Dunn, J. B., *Fr.* 127 Vinton
Dunning, J. C., *Asst. Prof.*
45 Waterman
Durgin, A. D., *Jr.* 81 Waterman
Dutt, B. N., *Gr.* 10 Congdon
Dwyer, F. M., *Fr.* 90 Newark

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Eastwood, W. R., *Sr.* 354 Manton Ave.
Eaton, H. T., *Fr.* U. 17
Eayrs, E., *Fr.* 220 Camp
Eddy, J. L., *Fr.* 52 Taber
Edinger, M. L., *So.* C. 19
Edwards, E. V., *W. Fr.* 136 West Clifford
Edwards, J., *Asst. Ladd Obs.* 210 Doyle Ave.
Edwards, S. O., *Trustee* 181 Lloyd Ave.
Ehmke, L. D., *Jr.* 127 Benefit
Eicke, W. H., *So.* U. 13
Ekstrom, C. E., *Fr.* 70 Seaman
Ellis, N. F., *W. Fr.* Apponaug
Emery, E. H., *So.* 110 Waterman
Emery, S. S., *Fr.* U. 22
Emmons, H. E., Jr., *So.* 94 Angell
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Evans, M. G., *W. Fr.* 20 Hammond
Evans, M. J., *W. Fr.* Morgan Ave., Thornton
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Everett, W. G., *Prof.* 388 Lloyd Ave.
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Ewing, G. B., *So.* H. 39

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Falk, E. H., *So.* 100 Waterman
Farlee, H. J., *Fr.* M. 427
Farnham, F. A., *Fr.* 71 Barnes
Farnham, J. H., *Jr.* 4 Manning
Farnum, M. M., *W. So.* 118 Cushing
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Fay, S. F., *Sp.* H. 17
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Feeney, A. E., *So.* 604 Broadway
Feiner, P. A., *Fr.* 14 Star
Feinstein, H., *Fr.* 106 Olney
Feitelberg, A., *Jr.* M. 322
Ferguson, J. B., *Dem'r* 369 Broad
Ferguson, W. W., *Fr.* 304 Benefit
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Field, Miss A., *Gr.* 222 Medway
Field, C. C., *Fr.* 94 Angell
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Field, R. W., *Jr.* No. S.
Files, C. A., *Jr.* C. 22
Fill, C., *W. Sr.* 118 Cushing
Flagg, M. M., *W. Jr.* 118 Cushing
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Foote, H. E., *Jr.* H. 30
Ford, T. R., *Fr.* H. 45
Forward, M. K., *Jr.* 110 Waterman
Foss, S. W., *Jr.* 110 Waterman
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[Fowler, H. T.,] *Prof.* 127 Lloyd Ave.
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Fraga, J. J., *Fr.* 39 Armstrong Ave.
Francis, P. H., *Gr. Asst.* 385 Laurel Hill Ave.
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Furey, G. W., *Sp.* 8 Belmont Ave.
Furrer, J. A., *Gr.* 261 Winter, Fall River, Mass.

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Gallant, R. B., *So.* 94 Angell
Gallup, W. L., *So.* U. 51
Gammell, J. L., *So.* B. 1
Gammell, R. I., *Trustee* 50 So. Main

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Garrett, W. H., *Sr.* 127 Angell
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Gelb, V. C., *Sr.* 4 Manning
Ghodey, J. H., *Fr.* 81 Waterman
Gibbs, Miss L. R., *W. Sp., Cataloguer* 96 So. Angell
Giblin, J. V., *Jr.* C. 10
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Gifford, Miss M. A., *Gr.* Moses Brown School
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Gillis, R. A., *Jr.* H. 32
Glichouse, A., *Fr.* M. 324
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Goldberg, J. S., *Sr.* C. 5
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Gottstein, J., *So.* C. 5
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Graham, W. A., *Fr.* 37 Glenham
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Greene, J. F., *Assoc. Prof.* 47 George
Greene, J. H., Jr., *So.* 38 Benevolent
Greene, J. I., *So.* C. 30
Greene, M. B., *W. Sr.* 5 Catalpa Road
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Grinnell, C. J., *So.* 33 Cushing
Grose, L. R., *Instr.* S. 18
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Gunn, W. P., *So.* 110 Waterman

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Haire, J. R., *So.* C. 12
Hale, L. K., *Fr.* 308 Benefit
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Hall, R. W., *Jr.* C. 22
Hall, L., *So.* 185 Althea
Hall, W. B., *Sp.* High Service Ave.
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Halloran, J. F., *Fr.* H. 36
Harcourt, H. N., *So.* B. 14
Harkness, A. G., *Prof.* 7 Cooke
Harkness, S. B., *Instr.* 92 Williams
Harley, M. P., *W. Sr.* 22 Church, Pawtucket
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Harrington, E. W., *Jr.* 110 Waterman
Harris, B. M., *Sr.* 127 Angell
Harris, J. E., *Sr.* 4 Bell
Harris, S. P., *Sp.* 97 Dyer
Harris, W. E., *Jr.* 27 Park
Hart, J. E., *So.* H. 47

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Hastings, H. W., *Gr. Instr.* 101 Williams
Hastings, W. T., *Asst. Prof.* 13 John
Hastings, Mrs. W. T., *Adv. Council, W.* 13 John
Hathaway, C. S., *Fr.* 444 Public
Haven, M. B., *So.* H. 34
Hawes, R. P., *Gr.* 63 Charles Field
Hawkins, A. C., *Gr. Instr.* 39 Benevolent
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Hayward, S. V., *So.* 127 Angell
Hayward, W. S., *Fr.* C. 12
Hazard, F. R., Jr., *Jr.* C. 28
Hazard, G. N., *Sr.* H. 26
Hazard, R. G., *Fellow* Peace Dale
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Healey, F. C., *Fr.* 86 Larch
Heathcote, C. D., *Fr.* 51 Barnes
Hebner, G. E., *So.* H. 4
Hempel, E. A., *W. So.* 168 Progress Ave.
Hempel, E. G., *Sr.* 168 Progress Ave.
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Henry, D. E., *Jr.* 100 Waterman
Henson, P. P., *So.* B. 9
Herreshoff, G., *W. Sp.* 146 Lloyd Ave.
Hibbs, H. H., Jr., *Gr.* Stephenville, Texas
Higgins, A. H., *Sr.* 127 Angell
High, L. C., *Sr.* H. 20
Hill, C. J., *Fr.* B. A
Hill, J. E., *Prof.* 86 Taber Ave.
Hill, P. P., *Fr.* U. 16
Hill, P. W., *So.* 23 Barrows
Hill, Miss S. E., *Sec'y to Registrar* 366 Hope
Himes, L. S., *W. Sr.* Phenix
Hincks, E. W., *So.* 62 Glenham
Hodges, G. W., *Jr.* H. 18
Hoffman, A. S., *Jr.* No. S.
Holden, E. E., *W. Jr.* West Barrington
Holding, R. S., Jr., *Jr.* 4 Manning
Holman, C., *Gr.* Saylesville
Holt, N. E., *Gr. Instr.* 115 Governor
Hopkins, F. B., *W. So.* 54 Olive
Hopkins, R. C., *So.* 194 Smith
Horr, G. E., *Fellow* Newton Centre, Mass.
Horrigan, E. J., *Jr.* C. 9
Horton, M. K., *W. So.* 118 Cushing
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Hull, M. F., *W. Fr.* 163 Clarendon, Auburn
Hull, N. B., *Sr.* 54 College
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Hunt, F. J., *So.* No. S.
Huntington, H. B., *Assoc. Prof.* 23 John
Hurlin, R. G., *Gr.* 45 Waterman
Hurlin, W. H., *Fr.* H. 41
Hutchins, R. E., *Instr.* 52 Beech, Pawtucket
Hyde, H. C., *So.* 65 College

Ingalls, H. E., *Jr.* 94 Angell
Ingles, W. J., *Fr.* 86 Larch
Isaacson, A. S., *Sr.* Bristol

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Jackson, H. M., *So.* H. 31
Jacobs, W. B., *Prof.* 310 Olney
Jeffery, W. H., *Fr.* 85 Potter Ave.
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Jenkins, E. F., *W. Fr.* Oak Lawn
Jenney, J. L., *So.* 81 Waterman
Jennings, A. J., *Trustee*
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168 Walnut, East Providence
Johnson, R. N., *Jr.* H. 48
Johnston, G. F., *Fr.* 81 Waterman
Jones, A. H., *Asst. Prof.*
59 Charles Field
Jones, A. S., *W. Fr.* Westerly
Jones, E., *W. So.* 118 Cushing
Jones, M. H., *W. Jr.* 118 Cushing
Jones, T., *W. Sr.* 127 Howell
Joslin, C. F., *Sr.* 65 College
Joslin, H., *Fr.* 65 College
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Keville, T. B., *Fr.* 124 Harold
Kincaid, C. F., *Gr.* 62 College
King, H. M., *Trustee* 8 Cushing
King, I. A., *Jr.* 81 Waterman
King, Miss L. S., *Dean, W.; Prof.*
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Langdon, G. W., Jr., *Sr.* 54 College
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Langley, H., *So.* U. 50
Lapham, O., *Trustee* 183 Waterman
La Roe, G. H. A., *So.* 48 Rosedale
Larrabee, H. A., *So.* H. 16
Leacher, J., *Gr.* Riverside
Legris, J. M., *Jr.* Arctic

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Leland, B. T., *Gr.* 420 Hope
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Leonard, V. W., *Fr.*
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Levin, C. A., *Fr.* C. 18
Levine, B. S., *Gr.* 202 Lippitt
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Little, L. T., *So.* U. 18
Littlefield, B., *W. Sr.* 102 Bowen
Littlejohn, W. F., *So.* 35 Benefit
Liu, T. F., *Fr.* H. 17
Long, H. I., *Fr.* 42 Angell
Long, J. J., *Gr., Instr.*
46 Front, Woonsocket
Longwell, S. E., *Gr.* 41 Angell
Lord, R. M., *Jr.* 34 Cushing
Loucks, F. L., *Jr.* C. 13
Loud, E. C., *So.* 81 Waterman
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Loxley, L. E., *Sr.* H. 18
Lozovitsky, M. J., *Fr.* 1 Victor
Luber, A., *Jr.* 40 Bowen
Lucas, B. L., *Fr.*
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Luther, M. R., *W. Sr.* 81 Camp
Lyons, S. H., *Fr.* C. 18

McBee, W. R. L., *Fr.* 195 Waterman
McCaull, J. A., *Sr., Gr.* C. A
McCoy, C. E., *Gr.* 114 George
McCormick, J. H., *Sp.* 226 Olney
McCrone, H. B., *So.* 24 George
MacDonald, W., *Prof.* 132 George
Macdougall, H. C., *Lecturer*
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McDuff, F. E., *Jr.* C. 10
McGinn, J. J., *Fr.* 12 Grover
McGonagle, M. M., *W. Fr.*
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McGovern, J. J., *Jr.* C. A
Mackay, C. B., *Fr.* 110 Waterman
McKay, R. C., *Jr.* H. 6
McKenzie, H. W., *Sp.* 41 Angell
McKinnon, A. G., *Fr.* 152 Congdon
MacLaughlin, E. A., *Jr.* 26 Amity
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MacNeill, S. T., *Fr.* H. 43
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258 Medway
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Marseglia, A. A. D., *W. Fr.*
235 Federal

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Marvel, F. W., *Prof.* 281 Olney
Maryott, A. J., *Gr.* Wakefield
Mason, E. W., *Trustee* 149 Waterman
Mason, K. O., *Jr.* H. 30
Mason, M. C., *Jr.* H. 23
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Meader, P. D., *Jr.* H. 23
Meckel, R. J. Y., *Gr.* 127 Angell
Medbery, H. E. M., *Jr.* No. S.
Mendenhall, R. E., *Gr.* 42 Angell
Messer, H. M., *Fr.* H. 41
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Metcalf, H. P., *W. Sp.* 132 Bowen
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Michelson, H., *Fr.* 82 Aborn
Micoleau, H. F., *Instr.* 262 Brown
Miller, D. J., *Fr.*
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